

PERCEPTIONS OF COMPLEMENTARY AND ALTERNATIVE THERAPY AND ITS USES IN KINGDOM OF SAUDI ARABIA

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Abstract

Background: Complementary and alternative therapies (CAT) are increasingly utilized in health care settings, yet there is limited understanding of their prevalence, effectiveness, and demographic associations. This study **aimed to** examine the usage, knowledge, and attitudes towards CAT among a diverse participant group and explore factors influencing their utilization. **Methodology:** A cross-sectional survey was conducted with 1,586 participants from a predominantly urban population. Data was collected through structured questionnaires that assessed demographic characteristics, knowledge, usage, and perceptions of CAT. **Results:** The study involved 1,586 participants, predominantly female (82%) and Saudi nationals (97.1%). The majority were students (48.5%), with 66.1% reporting adequate income. More than half (62.3%) were knowledgeable about complementary and alternative therapies (CAT), and 51.3% reported using CAT. There was no significant gender or nationality-based difference in CAT use; however, occupation, income, marital status, and education level showed significant associations with CAT usage. **Conclusion:** The findings indicate that CAT is widely utilized and recognized, with significant variations based on demographic factors such as occupation and education. Despite a high level of knowledge about modern treatments, awareness of CAT's side effects remains limited. **Recommendations:** there are obvious needs for enhanced education on the safety and effectiveness of CAT and suggest that targeted interventions may be beneficial in addressing specific demographic groups. Future research should explore the qualitative aspects of CAT usage and the reasons behind its preferences and perceived effectiveness.

Key words: Perception, Complementary, Alternative Therapy, Uses

Introduction:

Over the last few eras, use of complementary and alternative medicine (CAM) has grown in popularity, changing health professionals' knowledge and attitude toward CAM, and the treatment suggested by them [1]. Complementary and alternative therapy (CAT) is still an alternative to traditional medicine. Indigenous customs, wisdom, and medical practices were engaged in several nations to avoid or treat a variety of sicknesses. A variety of coordination's and the usage of regional herbs or herbal constituents are types of traditional medicine and denotes to numerous knowledge, talents, and exercises created on beliefs, and understanding from dissimilar philosophy [1], [2], [3], [4], [5]. Complementary and alternative therapy (CAT) can be categorized into biological behavior techniques as herbal medicines, vitamins, and food enhancements along with non-biological techniques, comprising acupuncture, hydrotherapy, massage, and music therapy [6] [7].

The World Health Report., 2017 positions that complementary and alternative therapy (CAT) is closely associated with lifestyle and can address health requirements by possibly avoiding and cure of chronic illnesses [8].

According to recent practices, complementary and alternative therapy (CAT) covers all diagnostic and therapeutic modalities that differ from the fundamentals of conventional therapy. The traditional system likewise uses complementary and alternative therapy (CAT) treatments, which are realized to be extensively safe and effective which less regularly global accepted [1]. Amongst other effects, complementary and alternative medicine is universally recycled to delight pain, mental matters, cardiovascular and lung disorders, in addition to deliver relief for cancer embarrassment [9], [10] The training of complementary and alternative therapy (CAT) in patients with neurological complaints such epilepsy, multiple sclerosis, neuropathies, dementia, and spinal cord injury.

Patients who use complementary and alternative therapy (CAT) are concerned about potential side effects. These impacts might disturb a patient's pathology, medical condition problems, or interruption in receiving a diagnosis. Moreover, individuals suffering numerous pharmacological therapies and consuming CAT are added experience of anxiety. As with traditional medications, herbal treatments and dietary supplements (HS) comprise definite risks for adverse effects and interactions with cure therapy. From side to side decreasing the systemic engagement or bioavailability of traditional drugs, or an increased length of hospital visit, this might product in therapeutic failure. Nevertheless, the side effects of CAT that patient's description is yet unknown and need extra research [12].

Nurses and other healthcare specialists have engaged in acupuncture, music therapy, hypnosis, massage therapy, aromatherapy, and extra therapies in their clinical practices to deliver an extra comprehensive method to patient treatment and care, for they support a whole methodology to health, nurses generally have a positive outlook concerning complementary and alternative therapy (CAT) [11].

CAM therapies such as herbal medicine, acupuncture, cupping (hijama), and spiritual healing are increasingly being used alongside conventional medicine to treat chronic conditions like arthritis,

diabetes, and hypertension, as well as to alleviate symptoms such as pain, stress, and insomnia [2], [3]. The holistic approach of CAM focuses on treating the person as a whole, addressing not only physical symptoms but also mental, emotional, and spiritual well-being. Many patients in Saudi Arabia turn to these therapies due to their historical significance, perceived safety, and fewer side effects compared to some conventional treatments. Additionally, the increasing integration of CAM into the healthcare system reflects its growing importance as a complementary approach to enhancing patient care and improving overall health outcomes.

Despite the benefits of CAM, its use requires certain precautions to ensure patient safety. Not all therapies are suitable for everyone, and some may interfere with conventional treatments or exacerbate medical conditions if not properly managed [11]. Therefore, it is essential to consult healthcare providers before starting any CAM therapy. Patients should be informed about potential interactions with prescribed medications, dosage regulations, and the credibility of practitioners providing these therapies. Nursing professionals play a critical role in this process [10]. Nurses, as part of the healthcare team, are positioned to educate patients about the safe and effective use of CAM therapies. They can provide guidance on the appropriate selection of therapies based on individual health needs, ensure that patients disclose their use of CAM to avoid any adverse reactions, and advocate for a holistic approach to care. By promoting an evidence-based understanding of CAM, nurses contribute to the integration of alternative therapies into mainstream healthcare, ultimately enhancing patient outcomes and fostering a comprehensive model of care [11], [12].

Aim of study: to examine the knowledge, attitudes, and use of complementary and alternative therapy (CAT) among the adult Saudi population.

Methodology

This descriptive cross-sectional study targeted all regions and cities within the Kingdom of Saudi Arabia (KSA). A convenience sampling method was employed, including all available adult Saudi individuals of both sexes who met the inclusion criteria. Specifically, participants were required to be between 19 and 60 years old, of both female and male sex, and willing to participate in the study. Individuals who refused to participate or had cognitive impairments were excluded from the study.

Data collection was conducted online using a structured web-based questionnaire adapted from Belachew et al. (2017). The questionnaire comprised three main sections. The first section consisted of 9 questions focused on participants' socio-demographic and personal data, including gender, age, nationality, region, occupation, monthly income, marital status, education level, and religion. The second section consisted of 12 questions assessing participants' knowledge about various types of CAT, such as medical herbs, spiritual treatments, massage, popular nutritional supplements, and cupping. Additionally, this section investigated any side effects experienced while using CAT, including abdominal pain, vomiting, diarrhea, or no side effects. The third section consisted of 9 questions evaluating participants' attitudes toward CAT, asking questions about the perceived effectiveness of CAT over medications, perceived safety of CAT compared to

conventional medication, preference to integrate CAT to the conventional medications, their preference for consulting CAT practitioners over physicians, their preference to recommend CAT practitioners for sick person, the perceived cost-effectiveness of CAT compared to medication, practicing of using CAT with conventional medications for themselves, preferred herbal medicine used, and the preference route of administrated medication. To assess the attitude level, scoring system between 0 for strongly disagree and 5 for strongly agree was used. The sum of the scores were assessed and having more than 60 % of the score indicated positive attitude toward using of CAT.

Ethical Considerations

Ethical considerations were strictly adhered to throughout the study. The study was conducted after having the approval from committee of research ethics of Deanship of scientific research of Qassim University no. 24-81-05 for 12-3-2024. It was explicitly stated that participants were free to withdraw from the study at any time without any consequences. Confidentiality was maintained rigorously, ensuring that participants' private information was not disclosed in any manner. Approval for participation was considered granted once the participant accepted the link to the questionnaire and completed it.

Results:

Table 1. The study included a total of 1,586 participants, with a predominant representation of females (82.0%) compared to males (18.0%). The vast majority of participants were Saudi nationals (97.1%), with a small proportion of non-Saudis (2.9%). In terms of occupation, students constituted the largest group (48.5%), followed by employees (27.7%). Other occupational categories included unemployed individuals (7.9%), retirees (6.4%), those involved in selling (8.4%), and housewives (1.1%). Regarding monthly income, 66.1% of the participants reported having an adequate income, while 33.9% described their income as inadequate. Marital status varied among participants, with 60.8% being single, 35.6% married, 1.3% widowed, and 2.3% divorced. Regarding the educational level of the participants the majority of participants had attained university education (63.7%), followed by high school education (19.1%). Finally, (99.8%) of participants identified as Muslim religious

Table 2. The table illustrates participants' knowledge and usage of complementary and alternative therapies (CAT), which indicated that 72.3% of the participants asked about their knowledge of modern treatments, including medicines, surgeries, and vaccines, indicated they were informed, while 27.7% reported a lack of information. On the other hands, 62.3% of the participants were knowledgeable about complementary and alternative therapy, with 37.7% indicating they had no information on the topic. Regarding awareness of the side effects associated with CAT, a majority of 59.8% of participants were unaware of any potential side effects, whereas 40.2% were informed about them. When it came to the actual use of CAT, 51.3% of participants reported using these therapies, while 48.7% did not. Among those who used CAT, a significant majority (83.4%) did not notice any side effects. However, 7.6% experienced abdominal pain, 5.2% reported unspecified side effects, 2.6% experienced vomiting, and 0.5% found the therapy ineffective or noted an increase in symptoms.

Table 3. shows that 52.0% of participants reported using CAT, while 48.0% did not. (71.4%) of participants preferred the oral route. Other routes included dermal (25.0%), buccal (2.7%), and

anal (0.9%). (69.7%) of Participants used various types of CAT, with popular nutritional supplements being the most common. Other types included massage therapy (34.5%), cupping (27.7%), meditation (16.3%), yoga (13.8%), and aromatherapy (2.2%). When it came to the parts of herbal medicine commonly used, leaves were the most frequently used part (69.1%). Other parts included seeds (43.5%), fruits (37.4%), flowers (33.0%), roots (10.3%), and bark (8.9%) .

Table 4 . Illustrated that (53.7%) of participants were used neutral while a smaller proportion agreed (15.3%) or strongly agreed (4.9%), while 20.7% disagreed and 5.5% strongly disagreed. When considering their preference for visiting CAT practitioners over physicians, 34.7% of participants disagreed and 19.2% strongly disagreed . In terms of recommending a sick person to first visit CAT practitioners, 34.6% disagreed and 18.1% strongly disagreed . Finally, regarding the belief that CAT is less expensive than medication, 34.5% of participants agreed and 14.0% strongly agreed. A neutral position was maintained by 33.9%, while 13.2% disagreed and 4.5% strongly disagreed.

Table 5 . Shows that there was no significant difference in CAT usage between males and females ($p=0.072$) . Nationality also did not significantly influence CAT usage ($p=0.630$) . Occupation had a significant association with CAT usage ($p<0.001$) . Monthly income was significantly associated with CAT usage ($p=0.010$) . Marital status also showed a significant association ($p<0.001$) . Educational level was significantly associated with CAT usage ($p=0.002$).

Table 6 . Describes that there was no significant associations between participants' beliefs and attitudes and all items related to their socio-demographic data except for occupation , marital status and educational level $P_s = (0.000 , 0.000 , 0.001)$ respectively.

Figure 1. Regarding the types of CAT known to participants, medical herbs were the most commonly recognized, with 80.3% of participants indicating familiarity. Cupping was also well-known, with 74.4% of participants being aware of it. Popular nutritional supplements were known to 65.8% of participants, and massage was known by 58.5% of participants. Spiritual treatments were recognized by 24.7% of participants. Acupuncture and cauterization were the least known therapies, with only 0.4% and 0.3% of participants .

Figure 2. Examined the sources from which participants obtained their information on CAT. The internet was the most prevalent source, with 77.2% of participants citing it. Social media was the second most common source, with 59.7% of participants using it. Relatives were a significant source for 54.4% of participants, and friends provided information for 44.7% of participants. Books were a source of information for 26.9% of participants, and TV was the least common source, with 15.1% of participants using it .

Figure 3. Shows that 49.2% of participants when asked about the diseases that can be treated by CAT, identified headaches as treatable, making up 30.2% of the total responses. Burns were recognized by 31.2% of participants, accounting for 19.2% of responses, and eczema was noted by 25.5% of participants, constituting 15.6% of responses. Bone fractures were considered treatable by 13.9% of participants, representing 8.5% of responses. Additionally, 19.6% of participants believed that CAT could treat all of the listed conditions, and 23.7% indicated they did not know which diseases CAT could treat.

Figure 4. Describes that 52.5% of participants Stroke was commonly mentioned for treating with CAT therapy while Malaria was identified by 48.1% of participants and diabetes was noted by 40.2% of participants. Tuberculosis was mentioned by 45.8% of participants and epilepsy was identified by 44.8% of participants. Hypertension was noted by 30.4% of participants and obesity by 23.5% of participants. Inflammations were identified by 24.7% of participants and insomnia by 10.1% of participants. Finally, 25.6% of participants indicated they did not know which diseases CAT fails to treat.

Table 1: Distribution of participant's socio-demographic data

Socio-demographic data		No	%
Gender	Male	286	18.0
	Female	1300	82.0
Nationality	Saudi	1540	97.1
	Non-Saudi	46	2.9
Occupation	Student	769	48.5
	Employee	440	27.7
	Unemployed	125	7.9
	Retirement	102	6.4
	Selling	133	8.4
	Housewife	17	1.1
Monthly income	Inadequate	538	33.9
	Adequate	1048	66.1
Marital status	Single	965	60.8
	Married	565	35.6
	Widow	20	1.3
	Divorced	36	2.3
Educational level	Not reading or writing	1	0.1
	Read and writing	9	0.6
	Primary school	11	0.7

	Middle school	26	1.6
	High school	303	19.1
	Diploma	158	10.0
	University	1010	63.7
	Post graduated	68	4.3
Religion	Muslim	1583	99.8
	Not Muslim	2	0.1
	Prefer not to say	1	0.1

Table 2: Distribution of Participant's knowledge and usage of complementary and alternative Therapy

Items		No	%
Do you have information about modern treatments (Medicines - Surgeries- Vaccines...) ?	No	440	27.7
	Yes	1146	72.3
Do you have information about complementary and alternative therapy ?	No	598	37.7
	Yes	988	62.3
Do you know the side effects of complementary and alternative therapy ?	No	948	59.8
	Yes	638	40.2
Do you use the complementary and alternative therapy ?	No	772	48.7
	Yes	814	51.3
Did you notice any side effects when you use complementary and alternative therapy?	Nothing	679	83.4
	Abdominal pain	62	7.6
	Diarrhea	42	5.2
	Vomiting	21	2.6
	Not effective/ increasing the symptoms	4	0.5

	Other	6	0.7
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Table 3: Distributions of participant's characteristics of using complementary and alternative therapy

Participant's characteristics of using complementary and alternative therapy		No	%
Did you use complementary and alternative therapy in the past 2 years ?	No	761	48.0
	Yes	825	52.0
Do you combine complementary/alternative therapy and medications in your uses ?	No	626	39.5
	Yes	352	22.2
	Sometimes	608	38.3
Which administration route you prefer to use ?	Oral	1132	71.4
	Dermal	397	25.0
	Buccal	43	2.7
	Anal	14	0.9
What type of complementary and alternative therapy used?	Meditation	149	16.3
	Yoga	126	13.8
	Popular nutritional supplements	638	69.7
	Aromatherapy	20	2.2
	Massage therapy	316	34.5
	Cupping	254	27.7
What is the part of herbal medicine did you commonly use	Leaves	1046	69.1
	Roots	156	10.3
	Seeds	658	43.5
	Fruits	566	37.4
	Flowers	499	33.0
	Bark	134	8.9

Table 4: Distributions of participant's beliefs and attitude regarding using complementary and alternative therapy

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	No	%	No	%	No	%	No	%	No	%
Complementary and Alternative Therapy more effective than medication	88	5.5	328	20.7	851	53.7	242	15.3	77	4.9
Complementary and Alternative therapy is safer than medication	90	5.7	304	19.2	665	41.9	374	23.6	153	9.6
Complementary and alternative therapy Should be integrated to medication	102	6.4	235	14.8	465	29.3	540	34.0	244	15.4
I prefer first to visit completely and alternative practitioners than physician	304	19.2	550	34.7	367	23.1	247	15.6	118	7.4
I recommend a sick person first to visit complementary and alternative therapy practitioners	287	18.1	549	34.6	414	26.1	245	15.4	91	5.7
Complementary and alternative therapy is less expensive than medication	71	4.5	209	13.2	537	33.9	547	34.5	222	14.0

Table 5: Association between participant's socio-demographic characteristics and their usage of using complementary and alternative therapy

Socio-demographic characteristics		uses the complementary and alternative therapy				
		No		Yes		P-value
		No	%	No	%	
Gender	Male	153	53.5%	133	46.5%	0.072
	Female	619	47.6%	681	52.4%	
Nationality	Saudi	748	48.6%	792	51.4%	0.630
	Non-Saudi	24	52.2%	22	47.8%	
Occupation	Student	461	59.9%	308	40.1%	0.000*

	Employee	172	39.1%	268	60.9%	
	Unemployed	62	49.6%	63	50.4%	
	Retirement	32	31.4%	70	68.6%	
	Selling	36	27.1%	97	72.9%	
	Housewife	9	52.9%	8	47.1%	
Monthly income	Inadequate	286	53.2%	252	46.8%	0.010*
	Adequate	486	46.4%	562	53.6%	
Social media	Single	569	59.0%	396	41.0%	0.000*
	Married	185	32.7%	380	67.3%	
	Widow	6	30.0%	14	70.0%	
	Divorced	12	33.3%	24	66.7%	
Educational level	Not reading or writing	0	0.0%	1	100.0%	0.002*
	Read and writing	6	66.7%	3	33.3%	
	Primary school	5	45.5%	6	54.5%	
	Middle school	12	46.2%	14	53.8%	
	High school	173	57.1%	130	42.9%	
	Diploma	57	36.1%	101	63.9%	
	University	491	48.6%	519	51.4%	
	Post graduated	28	41.2%	40	58.8%	

Table 6: Association between participant's socio-demographic data and their beliefs and attitude regarding uses of Alternative and complementary therapies

Socio-demographic characteristics		Beliefs and attitude				
		Negative		Positive		P-value
		No	%	No	%	
Gender	Male	183	64.0%	103	36.0%	0.158
	Female	888	68.3%	412	31.7%	

Nationality	Saudi	1039	67.5%	501	32.5%	0.765
	Non-Saudi	32	69.6%	14	30.4%	
Occupation	Student	581	75.6%	188	24.4%	0.000*
	Employee	276	62.7%	164	37.3%	
	Unemployed	86	68.8%	39	31.2%	
	Retirement	47	46.1%	55	53.9%	
	Selling	72	54.1%	61	45.9%	
	free jobs	9	52.9%	8	47.1%	
Monthly income	Inadequate	358	66.5%	180	33.5%	0.548
	Adequate	713	68.0%	335	32.0%	
Marital status	Single	720	74.6%	245	25.4%	0.000*
	Married	321	56.8%	244	43.2%	
	Widow	9	45.0%	11	55.0%	
	Divorced	21	58.3%	15	41.7%	
Educational level	Not reading or writing	1	100.0%	0	0.0%	0.001*
	Read and writing	6	66.7%	3	33.3%	
	Primary school	4	36.4%	7	63.6%	
	Middle school	14	53.8%	12	46.2%	
	High school	208	68.6%	95	31.4%	
	Diploma	86	54.4%	72	45.6%	
	University	709	70.2%	301	29.8%	
	Post graduated	43	63.2%	25	36.8%	

Figure 1: Distribution of participant's knowledge regarding complementary and alternative therapy types

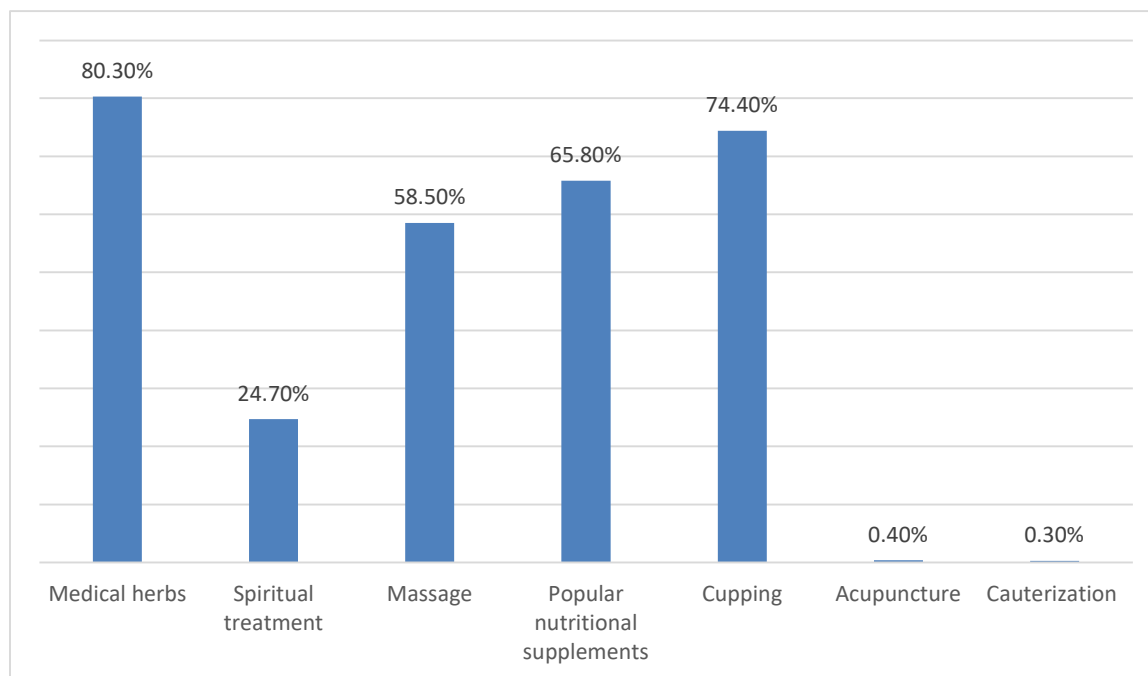


Figure 2: Distribution of participant's source of information regarding Complementary and alternative therapy

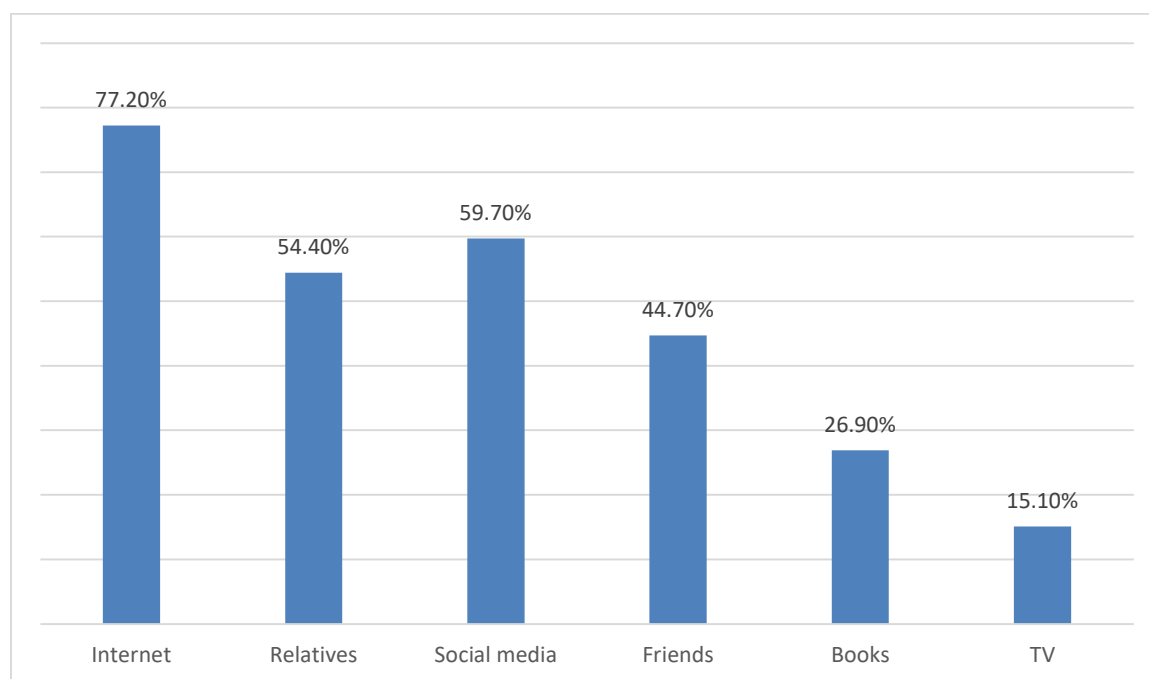


Figure 3: Distribution of diseases can be treated by complementary and alternative therapy

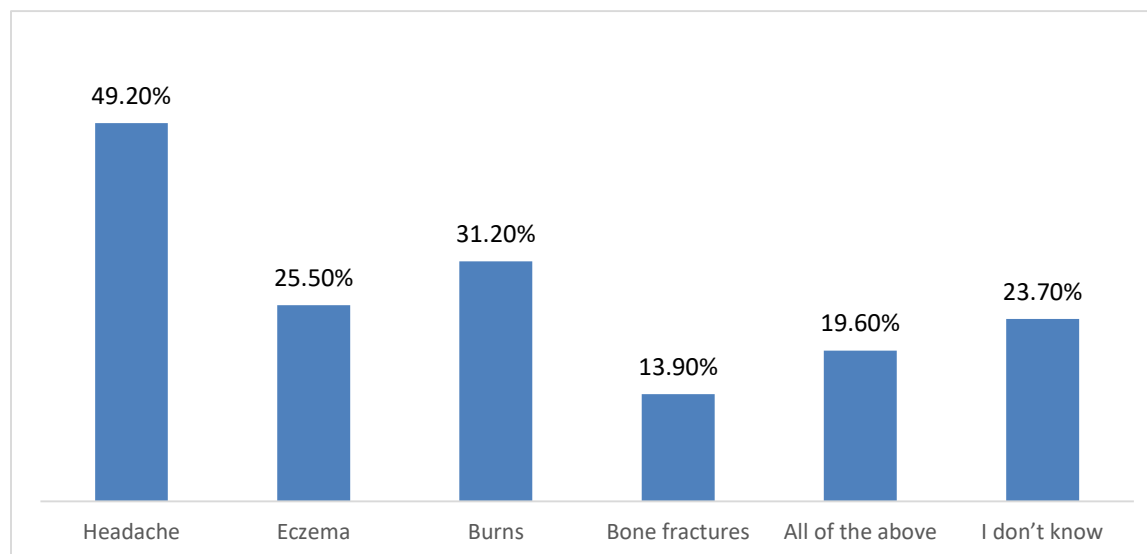
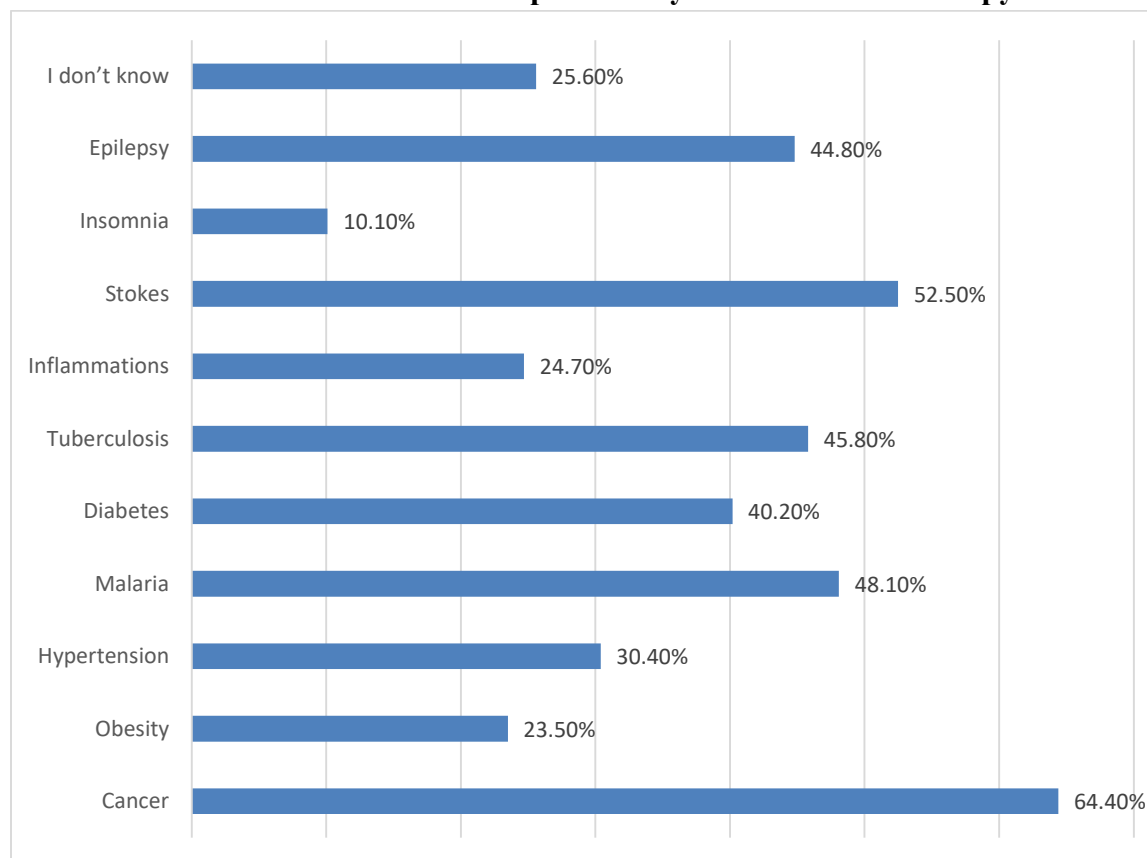


Figure 4. Distribution of diseases that complementary and alternative therapy used for treated it



Discussion

In recent years, complementary and alternative therapy (CAT) has gained considerable attention in the field of healthcare, both globally and within the Kingdom of Saudi Arabia [2], [10]. CAT encompasses a wide range of therapeutic practices that are not part of mainstream medical treatments, such as herbal

medicine, acupuncture, cupping, and nutritional supplements [10]. These therapies are often sought by individuals who prefer natural and holistic approaches to health, aiming to address not only the physical symptoms of illness but also the mental, emotional, and spiritual well-being of patients. The appeal of CAT lies in its perceived safety, its connection to cultural and traditional practices, and its potential to complement conventional medical treatments, especially for chronic conditions where patients are seeking alternatives to manage long-term symptoms or reduce medication side effects [5] [7].

The present study aimed to assess the knowledge, usage, beliefs, and attitudes toward complementary and alternative therapy (CAT) among a diverse sample of participants, as well as the association between CAT usage and various demographic factors. The findings highlight several important trends and associations that contribute to our understanding of how CAT is perceived and utilized within the population studied. One of the key findings of this study is the substantial prevalence of CAT usage, with 51.3% of participants reporting having used some form of CAT. This aligns with global trends and reflects a growing reliance on these therapies within the Saudi community. The study also revealed that while the majority of CAT users did not experience side effects, a small percentage (16.6%) reported adverse reactions such as abdominal pain and vomiting, underscoring the need for greater awareness and regulation of CAT practices. This highlights the importance of safe and informed use of CAT, particularly as it continues to gain popularity among diverse populations.

The knowledge and awareness of modern treatments, including medicines, surgeries, and vaccines, were relatively high among participants, with 72.3% reporting being informed. However, when it came to CAT, the awareness was slightly lower, with 62.3% indicating they had information about such therapies. This is similar to what reported in several previous studies conducted in Saudi Arabia [1], [13]. This gap in knowledge may reflect the less formalized and institutionalized nature of CAT compared to conventional medicine. Furthermore, a significant portion of participants (59.8%) were unaware of the potential side effects of CAT, highlighting a critical area for public health education and awareness campaigns. It is essential for healthcare providers and public health officials to bridge this knowledge gap, ensuring that the public is well-informed about both the benefits and risks associated with CAT.

Usage of CAT was reported by 51.3% of participants, indicating a substantial reliance on these therapies within the community. This finding is consistent with previous research that suggests a high prevalence of CAT usage in various populations globally. In a previous systematic review, Posadzki P et al showed that the average one-year prevalence of using CAT was 41.1 % and average lifetime prevalence was 51.8 % [14]. In addition, another systematic review showed that the prevalence of using CAT ranged between 9-65 % [15]. Harris et al. also reported in their systematic review, a prevalence of CAT usage of a range of 9.8-76% [16]. In Saudi Arabia, a review was conducted and showed a prevalence of using of CAT ranging between 21.6-90.5 % [15], [17]. The majority of CAT users did not experience side effects (83.4%), which might contribute to the positive perception and continued use of these therapies. However, some participants reported adverse effects such as abdominal pain (7.6%), unspecified side effects (5.2%), vomiting (2.6%), and ineffectiveness or symptom exacerbation (0.5%). These adverse experiences underscore the need for regulatory oversight and guidance on the safe use of CAT.

Medical herbs emerged as the most commonly known CAT, recognized by 80.3% of participants. This is in line with global trends where herbal medicine remains a popular form of alternative therapy [5], [7].

Other widely known therapies included cupping (74.4%) and popular nutritional supplements (65.8%). The familiarity with these types of CATs suggests cultural and traditional influences, as well as the impact of media and social networks in disseminating information about these therapies. These results are in disagreement with several studies which showed that prayers/spirituality and massage are the most commonly known CAM practices among students in Pakistan [18], Kuwait [19], Syria [20], Ghana [21], and Czech Republic [22].

The internet and social media were the primary sources of information on CAT, cited by 77.2% and 59.7% of participants, respectively. This finding highlights the significant role of digital platforms in shaping health behaviors and knowledge. Relatives (54.4%) and friends (44.7%) also played crucial roles, reflecting the influence of personal networks in health decision-making. This is similar to what was reported in previous studies that showed that internet and social media were the main source of information considering CAT [23]. These insights are valuable for designing targeted health communication strategies that leverage these influential sources to promote safe and informed use of CAT. The study also explored participants' beliefs and attitudes toward CAT compared to conventional medicine. A neutral stance was prevalent regarding the effectiveness and safety of CAT compared to medication, with 53.7% and 41.9% of participants being neutral on these aspects, respectively. Notably, a significant proportion (34.0%) agreed that CAT should be integrated with conventional medication, reflecting a growing trend toward integrative health approaches. However, a substantial number of participants preferred consulting physicians over CAT practitioners, indicating trust and reliance on conventional healthcare systems.

Regarding the diseases that can be treated by CAT, headaches were the most commonly identified condition (49.2%), followed by burns (31.2%) and eczema (25.5%). These perceptions align with common uses of CAT in managing symptoms and conditions that may not always require conventional medical intervention [24], [25], [26]. Conversely, cancer was most frequently cited as a disease that CAT fails to treat (64.4%), followed by stroke (52.5%) and malaria (48.1%). These findings reflect a general awareness of the limitations of CAT in treating severe and complex medical conditions [27].

The association between CAT usage and demographic factors revealed significant trends. Occupation was a strong predictor of CAT usage, with higher usage among employees (60.9%), retirees (68.6%), and those in sales (72.9%) compared to students (40.1%) and the unemployed (50.4%). This may be attributed to differences in disposable income, health needs, and exposure to CAT information. Monthly income was also significantly associated with CAT usage, with 53.6% of those with adequate income using CAT compared to 46.8% with inadequate income. This finding aligns with previous research suggesting that financial stability influences health-seeking behaviors, including the use of alternative therapies [28], [29]. Educational level was another significant factor, with the highest usage among those with diplomas (63.9%) and postgraduate degrees (58.8%), followed by university degrees (51.4%). This suggests that higher educational attainment may be associated with greater health literacy and openness to exploring various health options, including CAT [1], [5], [6].

Conclusion: this study provides valuable insights into the knowledge, usage, beliefs, and attitudes toward CAT among a diverse sample of participants. The findings highlight the widespread use of CAT, influenced by various demographic factors, and underscore the need for increased public education on the

safe and informed use of these therapies. Future research should explore the effectiveness and safety of CAT in more rigorous clinical trials and investigate strategies to integrate CAT with conventional healthcare to enhance patient outcomes and satisfaction. **Recommendations:** There are obvious needs for enhanced education on the safety and effectiveness of CAT and suggest that targeted interventions may be beneficial in addressing specific demographic groups. Future research should explore the qualitative aspects of CAT usage and the reasons behind its preferences and perceived effectiveness.

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