

Knowledge and Attitudes towards Complementary and Alternative Medicine in Population of Karachi- Pakistan Post COVID-19

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Abstract:

Background: Complementary and alternative medicine (CAM) is the term for medical products and practices that are not part of standard medical care. It is used for the maintenance of health and prevention, diagnosis, improvement, and/or treatment of physical and mental illness. The WHO defines CAM as “a broad set of healthcare practices that are part of that country’s tradition and are not integrated into the dominant healthcare system.”

Objective: The purpose of this study is to assess the knowledge attitudes and awareness regarding complementary and alternative medicine (CAM) in the population of Karachi- post covid 19. Many people who were infected with covid 19 also used CAM medicine. The study also determines the usage of CAM for covid 19 and whether it was beneficial or not.

Methods: The cross-sectional study was conducted among 207 participants, consisting of medical students and medical practitioners, aged 16 and above across Karachi using non – probability consecutive sampling. A validated online self-administered questionnaire was used.

Results: The results showed that 70% of the participants had used CAM at some point in their lives, with the most common reasons being affordability, personal belief and the perception that it is less paternalistic than allopathic medicine. The most commonly used CAM therapies were Unani medicine, herbal medicine and homeopathy. The majority of participants (62%) believed that CAM can be used in combination with allopathic medicine and 59% believed that it is effective for the treatment of various ailments. However only 37% of participants were aware of the regulatory bodies responsible for overseeing the practice of CAM in Pakistan.

Conclusion: In Pakistan allopathic medicine is still the mainstream healthcare, however complementary and alternative medicine (CAM) is also significantly used for treatment, especially in chronic conditions. It is important for doctors to be aware that their patients may be using CAM therapies and to educate the patients about the potential risks and benefits of using CAM medicine. Although currently there are no guidelines or regulations on using CAM therapies in Pakistan.

Introduction:

Complementary and alternative medicine (CAM) is the term for medical products and practices that are not part of standard medical care. The World Health Organization (WHO) defines TM (Traditional Medicine) as “the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, used in the maintenance of health and prevention, diagnosis, improvement, or treatment of physical and mental illness”. CAM is defined by the WHO as “a broad set of healthcare practices that are part of that country’s tradition and are not integrated into the dominant healthcare system.” [1] The terms “complementary medicine” and “alternative medicine” are used interchangeably with “traditional medicine” in some countries. [2] Traditional and complementary/alternative medicine is widely used in the prevention, diagnosis, and treatment of an extensive range of ailments. [3] In some regions, traditional and complementary/alternative medicine is more accessible than standard medical care. In fact, one-third of the world’s population and over half of the populations of the poorest parts of Asia and Africa do not have regular access to essential drugs. However, the most commonly reported reasons for using traditional and complementary/alternative medicine is that it is more affordable, more closely corresponds to the patient’s ideology, and is less paternalistic than allopathic medicine.[4] Traditional and complementary/alternative medicine has demonstrated efficacy in areas such as mental health, disease prevention, treatment of non-communicable diseases, and improvement of the quality of life for persons living with chronic diseases as well as for the ageing population. [5] The scope of TM is widely spread and is extended to various approaches of treatment, including materials extracted from plant herbs, animals, and mineral deposits. Moreover, spiritual remedies and physiotherapy treatment are also included in the domain of traditional medicine. These traditional therapies are included alone or in combination for diagnosis, treatment, and prevention of illness. [6] It should be noted that 80% of sick individuals, particularly in developing countries, depend more on complementary therapies rather than conventional healthcare, whereas the percentage using CAM therapy has declined to half among the population in industrialized countries. [7] Cultural beliefs and practices often lead to self-care or home remedies in rural areas and consultation with traditional healers. Evidence-based CAM therapies have shown remarkable

success in healing acute as well as chronic diseases. Alternative therapies have been utilized by people in Pakistan who have faith in spiritual healers, clergymen, hakeems, homeopaths or even many quacks. These are the first choice for problems such as infertility, epilepsy, psychosomatic troubles, depression and many other ailments. The traditional medicine sector has become an important source of health care, especially in rural and tribal areas of the country. The main reasons for consulting a CAM healer is the proximity, affordable fee, availability, family pressure and the strong opinion of the community. [8] Most Pakistanis rely on unani medicine, finding it efficacious, safe, and cost effective. /The use of herbal medicines and homeopathy is also widespread. [9] About 70% of the population, particularly in rural areas, use traditional and complementary/alternative medicine. Approximately 52 600 registered unani medical practitioners serve the nation through both the public and private sectors in urban and rural areas [10]

Integrative medicine is an approach to medical care that combines conventional medicine with CAM practices that have shown through science to be safe and effective [11]. Integrative medicine can help people who have symptoms such as fatigue, anxiety and pain. It can help people deal with conditions such as cancer, headaches and fibromyalgia. [12] Integrative medicine can help you find relief for many health and medical conditions, including autoimmune diseases, chronic pain, headache and migraines, infertility, digestive disorders, hypertension, obesity. [13]. Acupuncture, homeopathy, aromatherapy, meditation, aromatherapy, Tai chi or yoga, hypnosis and colonic irrigation are examples of medications and treatments. For millennia, CAM has been a popular way to meet people's basic healthcare needs. CAM is the primary source of treatment for millions of individuals. In other cases, it is the only source of treatment due to a lack of adequate healthcare access, cultural differences, and healthcare costs. Although conventional medicine (CM) has improved in recent decades, the use of CAM for illness prevention, control, and management has expanded around the world [14].

Objectives:

People's attitude toward their health seems to be changing. [15] One of the reasons that explain a change from the use of conventional medicine can be the result of people adopting new and alternative lifestyles [16]. They feel that complementary and alternative medicine therapies offer a more natural option as opposed to the often pharmaceutical choices of conventional treatments and this can better fit in with their way of life. [17] Therefore, the purpose of this study is to assess the knowledge attitudes and awareness regarding complementary and alternative medicine (CAM) in the population of Karachi- post covid 19

Method:

Study Design:

This study was conducted among premed students, medical students (MBBS) and medical practitioners (nurses, PG's and consultants) aged 15 and above across Karachi. The duration of study was 6 months after the approval of questionnaire. Inclusion criteria; pre med students, medical practitioners (nurses, PG's and consultants) and medical students (MBBS) aged 15 and above from different colleges, medical universities and hospital across Karachi. Exclusion criteria

were anyone who is not a medical practitioner or medical student (MBBS) and ages below 15. The research is based in English language so the questionnaire can be filled by students who can read & speak English.

Data collection:

The research is survey-based and conducted over the period of 6 months after approval of questionnaire. The questionnaire is self designed on the basis of previously published literature and current study. It included a brief demographic portion, then general public health the participants health information, knowledge about complementary/alternative medicines, use of CAM medication during COVID-19, concepts & opinions regarding use of CAM and natural therapies used by participants.

Questionnaires were distributed to pre-med students, medical students (MBBS) at the medical school and hospital (medical practitioners) through google forms via WhatsApp's. A total of 207 questionnaires were filled. Each responder completed the questionnaire only once.

Statistical Analysis:

A descriptive cross-sectional study was conducted. Data was collected online through google forms. Descriptive statistics (i.e. frequencies, percentages, means, and standard deviations) were calculated for all categories. Chi-square was used for establishing association between categorical variables. P value of ≤ 0.05 was considered statistically significant. IBM SPSS version 24 was used for the performance of all the statistical calculations.

Result:

A total of 207 participants of medical profession filled out the questionnaires. Their age range was 15-75 years with a mean of 2.46 ± 1.181 . Just over half (59.9%) were males. About 34.3 % of participants rate their knowledge about general health as good, with mean of 3.73 ± 0.961 .

The demonstration in table-01, shows no significant association (p-value=0.136). Age from 26-35 age; male n=28, female n=161 use complementary medicine, family influenced to use complementary medicine male n=18, female n=10, about male n=29 female n=11 rate their knowledge about general health okay, male n=31 female n=21 were very happy with their health, reason Male n=13 female n=5 use CAM medicine because doctor suggested them, male n=15 female n=2 think the benefits of CAM medicine help is preventing in illness / disease, male n=21 female n=4 who use CAM were patients of acute disease, male n=18 female n=12 think complication & interactions are the risk factors of CAM medicine. Some questions were asked with dichotomous responses (strongly agree, agree, somewhat, disagree, strongly disagree). n=30 give response of agree and somewhat with CAM medicine is more beneficial than conventional medicine alone, male n=26 female n=15 somewhat think complementary therapy would be helpful in coping up with symptoms, complications or side effects, male n=27 female n=10 somewhat thinks CAM is very effective in preventing disease, age group of 26-35 somewhat agree with more use of CAM medication in Pakistan. Probiotics natural CAM therapy,

meditation and reflexology was used for mind and body practice by mostly of the participants and was effective.

Demonstrate in table-02 show significant p-value, with more use of CAM medication in House Officer who have formal teaching/training in CAM taught by their med-school.

Table-03 demonstration shows highest significant value of p-value=0.000. the use of homeopathic CAM medication effective in COVID-19 treatment.

Table 04 demonstrated that house hold with income between 50,000-100,000 agrees to use CAM (p=0.043)

Table-05 demonstration show association with family income of 50,000-100,000. Doctor suggested them to use CAM medicine (p=0.008), majority of them used for COVID-19 treatment (p=0.004), majority participants agree with the statement of CAM (nonscientific) medicine is more beneficial than conventional medicine alone(p=0.013). CAM benefits them in healing opportunity (p=0.000) with risk of complication and interactions (p=0.070). Complementary therapy is helpful in coping up with symptoms, complications and side effects (p=0.001) and should be use more in Pakistan (p=0.038). Reflexology meditation CAM medication was used for body work (p=0.008) and mind work (p=0.002). Diet therapy used for natural self-healing practices (p=0.000).

The graphs mentioned below shows the association with medical position;

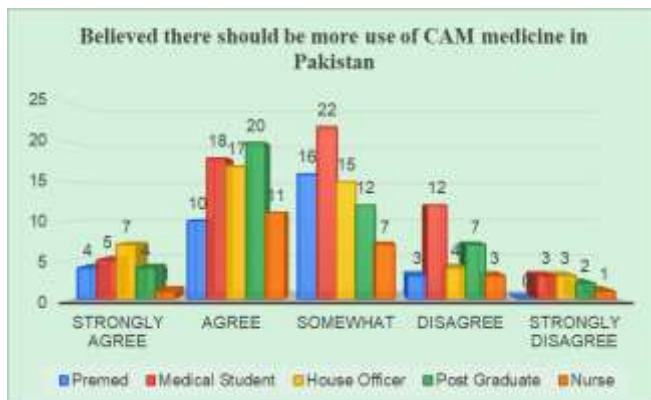


Figure 01; 16% of premed students and 22% of medical students somewhat believes that there should be more use of CAM in Pakistan. 7% nurses, 17% house officer and 20% postgraduate agrees, here in Pakistan use of CAM should increase.

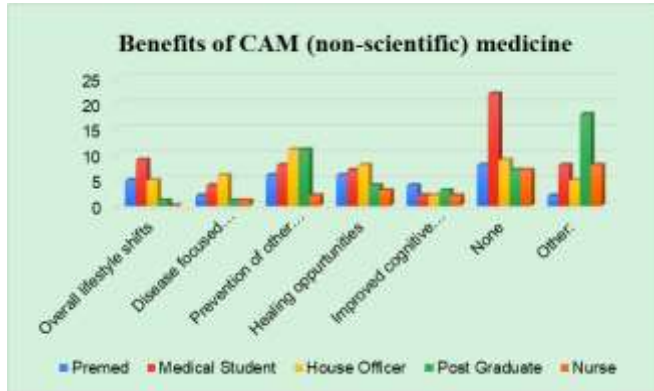


Figure 02 is showing the benefits of CAM medicine which our medical related professions know and mostly don't know any benefits related to CAM.

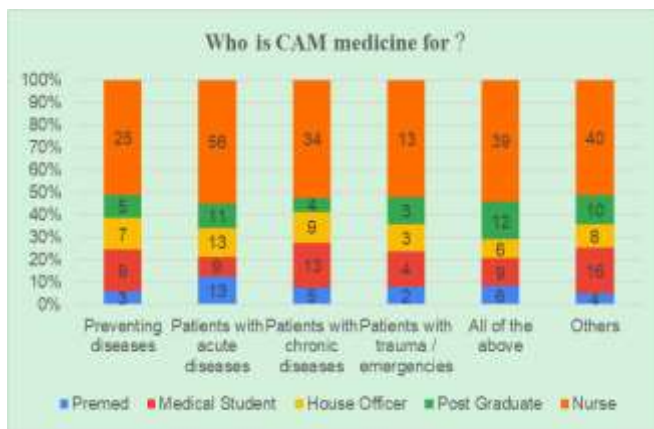


Figure03 is showing why is CAM medicine use. CAM can be used for preventing disease, can cure disease with acute and chronic conditions , patients with trauma / emergency and many more.

13% premed; used to prevent acute disease, 16% medical student; others, 13% house officer; to prevent acute disease, 12% post graduate agrees with all of the reasons given, 56 % nurse agrees with preventing disease of acute condition.

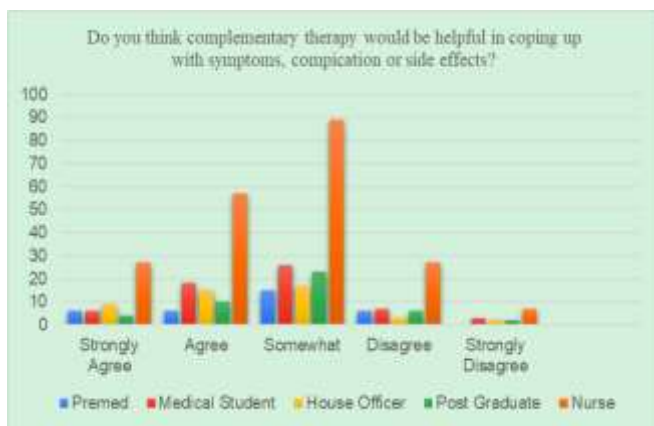


Figure 04: shows our participants somewhat agrees with the benefits of CAM therapy in preventing disease symptoms, complications and side effect.

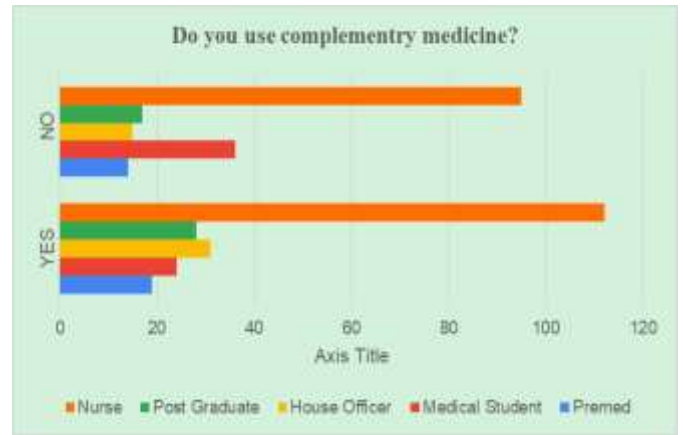
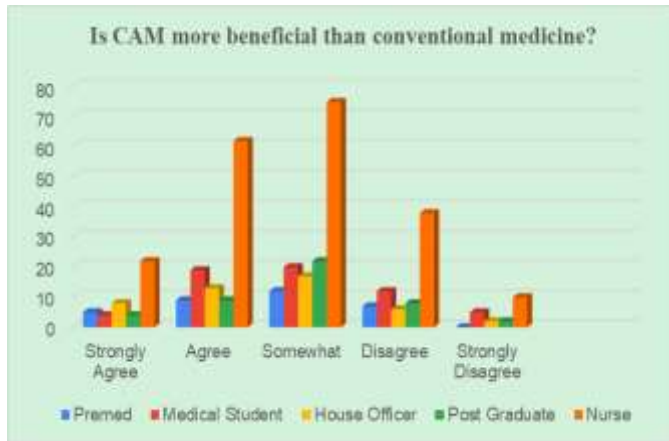


Figure 05 & 06; shows that more than 50% of our participant use CAM medicine and they somewhat agrees that CAM is more beneficial with conventional medicine.

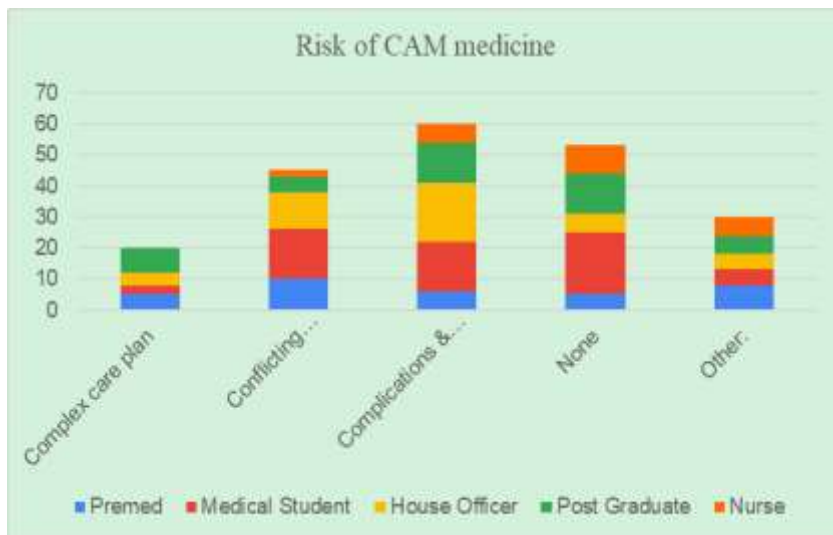


Figure 07; shows the risk related to CAM medicine like Complex care plan, Conflicting recommendation, Complications and interaction and others.

Premed mostly saying risk can be complex care plan, medical students, post graduate and nurses respond that there is no risk. House officer responds that risk is complicated & interactive.

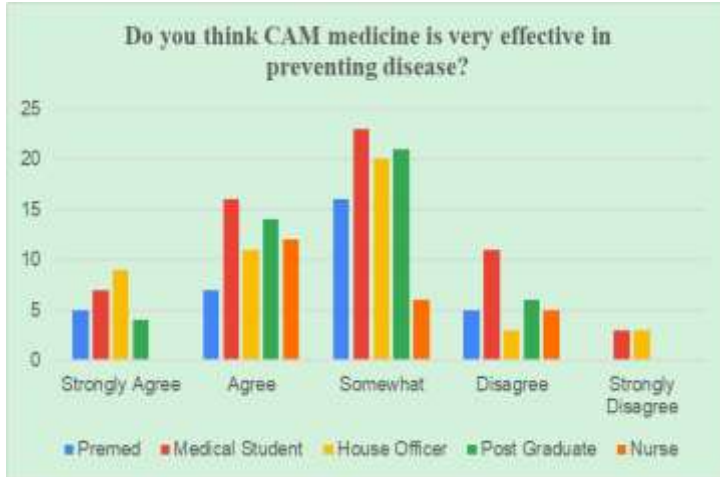


Figure 08 shows that are participants majority agrees CAM is somewhat effective in preventing disease.

Table-01

			AGE						Chi-square value	p-value		
			15-25	26-35	36-45	46-55	56-65	66-75				
Do you use complementary medicine?	Yes	Male	11	28	7	3	3	4	8.389	0.136		
		Female	5	161	14	7	3	1				
	No	Male	10	35	7	3	1	2				
		Female	9	17	6	5	1	0				
Who influenced you to use CAM (non scientific) medicine?	Doctor	Male	2	10	8	1					8.389	0.136
		Female	1	3	7	0						
	Family	Male	9	18	8	3	1	3				
		Female	4	10	5	7	3	1				
	Friends	Male	2	3	2	1	2	1				
		Female	0	3	2	0	0	0				
	Neighbor	Male		2	1							
		Female		1	0							
	Internet (Facebook, YouTube, TV, blogs,..)	Male		4	2	0	1					
		Female		1	0	1	0					
	None	Male	8	26	3	1	0	1				
		Female	9	15	6	3	1	0				
	Very bad	Male			1				8.389	0.136		

How would you rate your knowledge about general health?	Bad	Female											
		Male	8	6	5	1	2	5					
	Okay	Female	6	0	3	4	2	1					
		Male	6	29	6	1	0						
	Good	Female	4	11	7	2	1						
		male	6	22	9	2	2						
	Very good	Female	3	14	8	4	1						
		Male	1	6	3	2					1		
	Are you happy with your health	Extremely	Female	1	8	2	1						
			Male	10	17	6	1	1			8.389	0.136	
Very		Female	1	2	6	0	0						
		Male	8	31	14	2	1	4					
Moderately		Female	8	21	8	4	0	1					
		Male	1	10	2	2	2	2	2				
Slightly		Female	5	6	5	5	4	0					
		Male		4	1	0							
Not at all		Female		2	1	1							
		Male	2	1	1	1							
Reason for using CAM	Lack of trust of pharmaceutical drugs	Female	0	2	0	1							
		Male	2	8	3		1			8.389	0.136		
	Doctor suggesting it	Female	1	1	4		0						
		Male	3	13	7								
	Believe alternative medicine can help with disease control	Female	2	5	3								
		Male	4	8	4								
	Believed that alternative medicine had fewer side effect	Female	0	4	3								
		Male	2	1	0	2	0	1					
	Advice from others.	Female	1	5	2	1	1	0					
		Male	0	3	0	0							
Easily available and cheaper	Female	2	4	2	1								
	Male	0	4	2		0							
Others	Female	2	1	1		1							
	Male	6	6	2	4	3	4						
None	Female	2	5	2	7	2	1						
	Male	4	20	3	0								
Do you think CAM (non scientific) medicine is more beneficial than	Strongly agree	Female	4	8	2	2							
		Male	1	6	4					8.389	0.136		
	Agree	Female	2	2	6								
		Male	9	21	9	1	2						
	Somewhat	Female	1	11	3	3	2						
		Male	7	20	9	4	2	4					
	Disagree	Female	4	12	7	4	1	1					
		Male	4	13	2	0							

conventional medicine alone?		Female	6	7	3	2		0		
Do you think complementary therapy would be helpful in coping up with symptoms, complications or side effects?	Strongly disagree	Male	0	3	0	1	0			
		Female	1	1	1	2	1			
Do you think complementary therapy would be helpful in coping up with symptoms, complications or side effects?	Strongly agree	Male	2	7	4		1	1	8.389	0.136
		Female	1	4	7		0	0		
Do you think complementary therapy would be helpful in coping up with symptoms, complications or side effects?	Agree	Male	6	21	10	2	1	1		
		Female	1	10	1	3	1	0		
Do you think complementary therapy would be helpful in coping up with symptoms, complications or side effects?	Somewhat	Male	8	26	9	2	2	4		
		Female	7	15	8	5	2	1		
Do you think complementary therapy would be helpful in coping up with symptoms, complications or side effects?	Disagree	Male	4	8	1	0	0			
		Female	4	4	3	2	1			
Do you think complementary therapy would be helpful in coping up with symptoms, complications or side effects?	Strongly disagree	Male	1	1	0	2				
		Female	1	0	1	1				
Who is CAM medicine for?	Preventing disease	Male	0	9	3	1			8.389	0.136
		Female	1	5	6	0				
Who is CAM medicine for?	Patients with acute diseases	Male	9	21	8	2	1	2		
		Female	3	4	2	4	0	0		
Who is CAM medicine for?	Patients with chronic diseases	Male	6	10	5	0	0			
		Female	1	7	3	1	1			
Who is CAM medicine for?	Patients with trauma / emergencies	Male		6	2	1				
		Female		3	1	0				
Who is CAM medicine for?	All of above	Male	3	7	1	0	3	3		
		Female	5	4	6	3	3	1		
Who is CAM medicine for?	Others	Male	3	10	5	2		1		
		Female	4	10	2	3		0		
What do you think are the benefits of CAM medicine	Overall lifestyle shifts	Male	2	10	3				8.389	0.136
		Female	0	5	0					
What do you think are the benefits of CAM medicine	Disease focused therapies	Male	2	5	3					
		Female	0	1	3					
What do you think are the benefits of CAM medicine	Prevention of other illness / disease	Male	3	15	7	1	1			
		Female	0	2	3	6	0			
What do you think are the benefits of CAM medicine	Healing opportunities	Male	3	10	5					
		Female	2	5	3					
What do you think are the benefits of CAM medicine	Improved cognitive functioning, peace of mind, and awareness	Male	3	3	1	1				
		Female	1	1	2	1				
What do you think are the benefits of CAM medicine	Others	Male	2	4	4	2	3	5		
		Female	3	7	4	4	3	1		
What do you think are the benefits of CAM medicine	None	Male	6	16	1	2	0	1		
		Female	8	12	2	3	1	0		
What do you think are the risk	Complex care plan	Male	2	6	2	1	1	2	8.389	0.136
		Female	0	3	1	2	0	0		
		Male	8	14	6	0				

of CAM medicine?	Conflicting recommendation	Female	2	6	8	1			
	Complications and interaction	Male	3	18	13	1	2		
		Female	2	12	7	2	0		
	Others	Male	3	9	1	2	0	1	
		Female	4	5	0	1	3	0	
	None	Male	5	16	2	2	1	3	
		Female	6	7	4	5	1	1	
Do you think CAM medicine is very effective in preventing disease?	Strongly agree	Male	2	9	3	1			8.389 0.136
		Female	0	5	5	0			
	Agree	Male	6	17	9	2	3	1	
		Female	3	8	5	4	2	0	
	Somewhat	Male	10	27	11	2	1	5	
		Female	6	10	8	4	1	1	
	Disagree	Male	3	9	1	1	0		
		Female	4	8	1	2	1		
	Strongly disagree	Male	0	1	0	0			
		Female	1	2	1	1			
Do you think there should be more use of CAM medicine in Pakistan?	Strongly agree	Male	1	9	4				8.389 0.136
		Female	0	3	4				
	Agree	Male	8	21	10	2	3	3	
		Female	3	11	6	5	3	1	
	Somewhat	Male	10	25	6	2	1	2	
		Female	6	9	9	2	0	0	
	Disagree	Male	1	6	4	1	0	1	
		Female	4	9	0	2	1	0	
	Strongly disagree	Male	1	2	0	1			
		Female	1	1	1	2			
What type of natural therapies you use?	Diet therapy	Male	1	12	7		0	1	8.389 0.136
		Female	1	4	7		1	0	
	Herbal supplements	Male	3	5	3	0		1	
		Female	0	0	1	2		0	
	Probiotics	Male	6	16	7	1	1		
		Female	0	3	4	0	0		
	Vitamins & minerals	Male	3	6	5	2			
		Female	2	6	2	3			
	Others	Male	2	8	0	2	2		
		Female	1	10	1	5	2		
	None	Male	6	16	2	1	1	4	
		Female	10	10	5	1	1	1	
If yes, does it benefit you?	Strongly agree	Male	1	7	6	0		1	8.389 0.136
		Female	1	5	4	1		0	
	Agree	Male	6	19	7	4	2		
		Female	1	8	5	8	2		
	Somewhat	Male	7	18	9	1	1		
		Female	0	9	5	1	1		
	Disagree	Male	1	3	0			1	

		Female	1	1	1			0		
	Strongly disagree	Male	1							
		Female	1							
	None	Male	6	16	2	1	1	4		
		Female	10	10	5	1	1	1		
What type of bodywork (body based approach to improve realignment of body structures to improve its function, posture, energy) practices do you use?	Acupuncture	Male	1	6	3	1			8.389	0.136
		Female	0	4	1	0				
	Chiropractic	Male	2	3	3					
		Female	0	0	4					
	Reflexology	Male	2	19	7	0	1			
		Female	1	3	3	1	1			
	Therapeutic massage	Male	5	6	3	2			1	
		Female	2	8	3	3			0	
	Cupping	Male	0	4	1	0			2	
		Female	1	0	2	1			0	
Other	Male	1	2	2			3	1		
	Female	0	1	0			1	0		
None	Male	10	23	5	3	0	2			
	Female	10	17	7	6	2	1			
If yes, does it benefit you?	Strongly agree	Male	1	7	4	1			8.389	0.136
		Female	0	4	1	0				
	Agree	Male	3	22	5	2	3	4		
		Female	2	6	7	5	2	0		
	Somewhat	Male	7	12	9		1			
		Female	1	5	3		0			
	Disagree	Male	0	1	1					
		Female	1	1	2					
	Strongly disagree	Male			0					
		Female			1					
None	Male	10	21	5	3	0	2			
	Female	10	17	6	6	2	1			
What type of mind body practices (practices to help in mental focus, controlled breathing and body movements to relax the body and mind) do you use?	Biofeedback	Male	3	8	5				8.389	0.136
		Female	1	4	2					
	Hypnotherapy	Male	3	7	3					
		Female	0	1	3					
	Meditation	Male	3	15	8	0	1			
		Female	0	8	4	1	0			
	Energy healing	Male	3	5	2	1	0			
		Female	1	1	3	0	1			
	Yoga	Male	1	3	2		1			
		Female	0	3	1		0			
Others	Male	0	4	2	1	0	0			
	Female	1	4	2	1	1	1			
None	Male	9	21	2	4	2	6			
	Female	11	12	5	9	2	0			
If yes, does it benefit you?	Strongly agree	Male	2	7	4				8.389	0.136
		Female	1	4	2					
Agree	Male	3	14	10	1	2				

Somewhat	Female	1	6	7	2	0	
	Male	7	21	7	1	0	0
Disagree	Female	1	9	5	0	2	1
	Male		1	0			
Strongly disagree	Female		2	1			
	Male			1			
none	Female			1			
	Male	9	20	2	4	2	6
	Female	11	12	5	9	2	0

Table-02

		Do you use complementary medicine? (nonscientific medicine with modern scientific medicine)		Chi-square value	p-value
		YES	NO		
What is your position in the medical field?	Premed	19	14	10.478	0.033
	Medical student	24	36		
	House officer	31	15		
	Postgraduate	28	17		
	Nurse	10	13		
Do you have any illness / condition?	Diabetes	9	4	34.608	0.001
	Hypertension	14	3		
	Diabetes and hypertension	3	1		
	Obesity	4	5		
	Cholesterol	6	1		
	Chronic kidney disease	4	0		
	Arthritis	2	0		
	Respiratory disease	1	2		
	Liver disease	4	0		
	Psoriasis	1	1		
	Cancer	1	1		
	Others	41	29		
	None	22	48		
Have you had any formal teaching/training in CAM?	Yes, through medical school	47	10	50.177	0.000
	Yes, from elsewhere	28	7		
	No	37	78		

Table-03

what type of CAM medicine used for covid - 19.

		Use CAM	Homeopathic	Ayurveda	Unani	Others	None	Chi-square value	p-value
Was CAM helpful during COVID-19	Strongly agree	Yes	25	1		2		163.777	0.000
		No	3	0		0			
	Agree	Yes	24	8		8			
		No	3	0		0			
	Somewhat	Yes	5	5	1	4			
		No	1	0	1	0			
	Disagree	Yes	1	1					
		No	1	1					
	Strongly disagree	Yes				1			
		No				1			
	None	Yes					3		
		No					110		

Table-04

		Family income	Strongly agree	Agree	Somewhat	Disagree	Strongly disagree	None	Chi-square value	p-value
Do you use complementary medicine? (nonscientific medicine with modern scientific medicine)	Yes	less than 50,000	8	8	5	0		0	38.292	0.043
		50,000 - 100,000	5	24	9	0	0			
		More than 100,000	12	8	2	0	0			
		100,000-150,000	2	1	1	1	1			
		more than 150,000	0	13	13	0	2			
	No	Others	0	0	1	0	0	0		
		Less than 50,000	1	1	0	2	1	10		
		50,000-100,000	2	2	5	0	0	18		
		More than 100,000	0	3	0	1	0	5		
		100,000-150,000	0	2	3	1	0	4		
		More than 150,000	0	1	5	2	1	21		
		Others	0	0	1	0	0	3		

Table-05

		Family income					Others	Chi-square value	p-value			
		Less than 50,000	50,000 – 100,000	More than 100,000	100,000 – 150,000	More than 150,000						
Do you use CAM medicine?	Yes	18	45	14	6	28	1	7.382	0.194			
	No	15	27	9	10	30	4					
Who is CAM (nonscientific) medicine for?	Preventing diseases	2	13	5	4	1	0	34.335	0.101			
	Patients with acute diseases	11	21	5	4	13	2					
	Patients with chronic diseases	5	13	6	0	9	1					
	Patients with trauma / emergencies	4	5	1	1	2	0					
	All of above	6	10	3	2	18	0					
	Others	5	10	3	5	15	2					
Reason for using CAM.	Lack of trust of pharmaceutical drugs	4	11	3	1	1	0	58.222	0.008			
	Doctor suggesting it	6	18	3	2	4	0					
	Believe alternative medicine can help with disease control	4	10	7	0	5	0					
	Believed that alternative medicine had fewer side effects	4	0	3	2	5	2					
	Advice from others (family /friends)	3	4	0	1	4	0					
	Easily available and cheaper	2	7	0	1	2	0					
	Others	5	10	3	5	20	1					
	None	5	12	4	4	17	2					
	Did you use CAM (nonscientific) medicine for covid - 19?	Yes	16	40	12	4	16			0	17.365	0.004
		No	17	32	11	12	42			5		
Do you think CAM (nonscientific) medicine is more beneficial than conventional medicine alone?	Strongly agree	2	15	3	1	1	0	36.664	0.013			
	Agree	12	26	5	4	15	0					
	Somewhat	10	22	13	4	23	3					
	Disagree	8	7	2	5	15	1					
	Strongly disagree	1	2	0	2	4	1					
What do you think are the benefits of CAM	Overall lifestyle shifts	4	8	2	3	1	2	74.018	0.000			
	Disease focused therapies	3	7	1	1	2	0					

(nonscientific) medicine?	Prevention of other illness / disease	8	13	11	2	3	1		
	Healing opportunities	4	16	5	1	1	1		
	Improved cognitive functioning, peace of mind, and awareness	2	2	1	3	5	0		
	Others	4	11	3	2	22	0		
	None	8	15	0	4	24	1		
What do you think are the risk of CAM (nonscientific) medicine?	Complex care plan	6	6	2	1	5	0	30.018	0.070
	Conflicting recommendations	7	17	8	1	11	1		
	Complications & interactions	11	26	7	7	7	2		
	None	8	17	3	4	20	1		
	Others	1	6	3	3	5	1		
Do you think complementary therapy would be helpful in coping up with symptoms, complications or side effects?	Strongly agree	5	17	3	2	0	0	44.192	0.001
	Agree	10	22	9	5	11	0		
	Somewhat	10	25	10	7	34	3		
	Disagree	8	7	1	0	9	2		
	Strongly disagree	0	1	0	2	4	0		
Do you think CAM (nonscientific) medicine is a very effective in preventing diseases?	Strongly agree	3	13	4	2	3	0	22.344	0.322
	Agree	12	24	7	3	13	1		
	Somewhat	10	29	9	7	29	2		
	Disagree	8	5	2	3	10	2		
	Strongly disagree	0	1	1	1	3	0		
Do you believe there should be more use of CAM (nonscientific) medicine in Pakistan?	Strongly agree	6	11	2	1	1	0	32.531	0.038
	Agree	12	31	11	4	17	1		
	Somewhat	8	24	7	6	26	1		
	Disagree	5	5	3	3	10	3		
	Strongly disagree	2	1	0	2	4	0		
What type of bodywork (body-based approach to improve realignment of body structures to improve its function, posture, energy) practices do you use?	Acupuncture	2	9	2	1	2	0	51.939	0.008
	Chiropractic	2	7	3	0	0	0		
	Reflexology	10	18	5	1	4	0		
	Therapeutic massage	8	7	6	3	8	1		
	Cupping	1	4	0	0	6	0		
	Others	0	1	1	2	7	0		
	None	10	26	6	9	31	4		
If yes, does it benefit you?	Strongly agree	4	9	1	2	2	0	33.514	0.119
	Agree	10	15	11	3	21	1		

	Somewhat	8	18	5	2	4	1		
	Disagree	1	5	0	0	0	0		
	Strongly disagree	0	1	0	0	0	0		
	None	10	24	6	9	31	3		
What type of natural therapies (natural self-healing practices) do you use?	Diet therapy	7	20	4	2	1	0	57.001	0.000
	Herbal supplements	3	6	3	0	2	1		
	Probiotics	9	19	5	3	2	0		
	Vitamins & minerals	5	6	4	3	11	0		
	Others	2	6	4	3	17	1		
	None	7	15	3	5	25	3		
If yes, does it benefit you?	Strongly agree	3	11	4	4	4	0	30.192	0.217
	Agree	11	19	8	3	20	1		
	Somewhat	11	24	6	4	6	1		
	Disagree	1	3	2	0	2	0		
	Strongly disagree	0	0	0	0	1	0		
	None	7	15	3	5	25	3		
What type of mind body practices (practices to help in mental focus, controlled breathing and body movements to relax the body and mind) do you use?	Biofeedback	5	13	3	1	0	0	57.741	0.002
	Hypnotherapy	4	8	4	0	1	0		
	Meditation	7	14	8	5	6	0		
	Energy healing	2	9	2	0	4	0		
	Yoga	2	5	0	1	3	0		
	Others	2	7	1	2	5	0		
	None	11	16	5	7	39	5		
If yes, does it benefit you?	Strongly agree	4	8	2	3	3	0	57.393	0.000
	Agree	6	25	8	2	5	0		
	Somewhat	10	22	8	3	10	1		
	Disagree	2	1	0	0	1	0		
	Strongly disagree	0	0	0	1	0	0		
	None	11	16	5	7	39	4		

Discussion:

The study described above focuses on the use of complementary and alternative medicine (CAM) among 207 medical professionals. The results show that just over half of the participants were male, and about 34.3% rated their knowledge of general health as good.

Table 01 shows no significant association between age and the use of CAM, but the results indicate that a higher percentage of participants in the 26-35 age range used CAM, with family influence being a factor. Additionally, a higher percentage of participants in this age range rated their knowledge of general health as okay and were very happy with their health.

Table 02 shows a significant association between the use of CAM and formal training in CAM provided by medical schools. This suggests that education and exposure to CAM can play a role in the decision to use CAM.

Table 03 shows a high significant value for the use of homeopathic CAM medication in COVID-19 treatment. This result highlights the potential effectiveness of CAM in treating a specific illness.

Table 04 and Table 05 demonstrate a significant association between the use of CAM and household income. Participants with a household income between 50,000-100,000 were more likely to use CAM, and to use it for COVID-19 treatment. Additionally, these participants were more likely to agree that CAM is more beneficial than conventional medicine, and to use complementary therapy to cope with symptoms, complications, and side effects.

The results of this study indicate that various factors can influence the use of CAM among medical professionals, including age, education, income, and personal health experiences. The findings suggest that CAM can play an important role in the overall health and well-being of individuals, and merit further investigation and research.

Conclusion:

In Pakistan allopathic medicine is still the mainstream healthcare, however complementary and alternative medicine (CAM) is also significantly used for treatment, especially in chronic conditions. It is important for doctors to be aware that their patients may be using CAM therapies and to educate the patients about the potential risks and benefits of using CAM medicine. Although currently there are no guidelines or regulations on using CAM therapies in Pakistan.

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