



Received on 14 November, 2013; received in revised form, 04 February, 2014; accepted, 24 March, 2014; published 01 April, 2014

USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE IN THE POPULATION OF KEDAH DARUL AMAN, MALAYSIA

Shalini Sivadasan, Abdul Nazer Ali*, Looi Wan Lin, Daveena Balakrishnan, Shamala Ramachandran, Sockalingam Arumugam Dhanaraj

Faculty of Pharmacy, AIMST University, Semeling - 08100, Bedong, Kedah Darul Aman, Malaysia

Keywords:

Complementary, alternative medicine, use, health, maintenance

Correspondence to Author:

Abdul Nazer Ali (M. Pharm.,)

Associate Professor, Faculty of Pharmacy, AIMST University, Semeling, 08100, Bedong, Kedah Darul Aman, Malaysia

E-mail: abdul.nazerali16@gmail.com

ABSTRACT:

Aim: To determine the use of Complementary and Alternate Medicine (CAM) for health issues and health maintenance among the population of Kedah state, Malaysia.

Method: A questionnaire based cross-sectional survey was conducted for a period of three months in Kedah state, Malaysia. The questionnaire was prepared in English and Bahasa Malaysia and distributed to the randomly selected participants according to the language known by them.

Results: A total of 571 questionnaires were distributed out of which only 560 completed questionnaires were retrieved. Among the 560 participants, female were the most CAM users (54.46%). The age group among participants with more CAM usage was found to be 21-29 years (44.64%). According to the study, most respondents who use CAM were influenced from Malay (35.36%), Chinese (24.96%), and Indian culture (17.37%). The reasons for respondents to use CAM included to promote health (n=135), prevent illness (n=124) and treat illness (n=121). It was found that most respondents used biological products (33.14%) and alternative systems (22.26%) of which, herbal products were most popular among biological products (34.69%) and Malay medicine (39.73%) was most popular among alternative medicines.

Conclusion: The main motive for CAM use was found to be promotion of better health. Most of the participants believed in using CAM as first line medication because of its perceived efficacy, being naturally available, easy availability, and also because of advice from family and friends. The guidelines on proper selection and effective use of CAM should be provided to the society.

INTRODUCTION: In 1948, the World Health Organization (WHO) defined health as "a complete state of physical, mental, and social well-being and not merely the absence of disease or infirmity."

The public increasingly embrace "holistic" medicine when seeking treatment for chronic medical conditions. This philosophical shift has led to a sharp increase in the use of Complementary and Alternative Medicine (CAM), defined as modalities (e.g., acupuncture, herbal therapy, massage therapy etc.) employed in place of, or as adjunct to, conventional medical therapies. Surveys reveal that almost half of the U.S. population turns to such modalities, with acceptance and use of CAM expanding during the 1990s.

<p>QUICK RESPONSE CODE</p> 	<p>DOI: 10.13040/IJPSR.0975-8232.5(4).1263-63</p> <hr/> <p>Article can be accessed online on: www.ijpsr.com</p> <hr/> <p>DOI link: http://dx.doi.org/10.13040/IJPSR.0975-8232.5(4).1263-73</p>
--	---

Studies showing that CAM use tends to be higher among patients with diseases (e.g., arthritis, cancer), that are often inadequately treated by conventional approaches. This may suggest an inherent dissatisfaction with Western medicine. However, research suggests that the public is actually turning to CAM because its doctrine parallels their personal values and belief systems. For example, patients want physicians who regard them as whole persons - minds and spirits as well as bodies - and who believe in the healing power of nature. In fact, although CAM therapies are very diverse, ranging from well-established cultural traditions (e.g., Chinese traditional medicine) to quasi-allopathic modalities, marginally supported by current science (e.g., chelation therapy), most share common underlying philosophies. These include a belief in the interconnectedness of mind and body and respect for the innate mechanisms of healing.

The word "complementary" means "in addition to." Complementary medicine is treatment and medicine that is used in addition to the doctor's standard care. Thus complementary medicine is alternative medicine used together with conventional medical treatment in a belief, not proven by scientific methods, that it "complements" the treatment¹. Alternative medicine is any practice that is put forward as having the healing effects of medicine, but is not based on evidence gathered with the scientific method. Complementary and alternative medicine, as defined by National Center for Complementary and Alternative Medicine (NCCAM), is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine².

Thus, CAM can be defined as a single or group of potentially classifiable procedures that are proposed to either substitute for or add to more conventional medical practices in the diagnosis, treatment or prevention of healthcare problems. CAM includes all forms of therapy from acupuncture to Zen Buddhism as potential pathways to health. In Western culture, CAM is any healing practice 'that does not fall within the realm of conventional medicine'³. A single definition of CAM cannot exist without considering the many cofactors, like complexity of field, scientific credibility, meaningful terminology,

insurance and societal involvement, definitional Description by Federal Consensus⁴. It is often opposed to evidence based medicine and encompasses therapies with a historical or cultural, rather than a scientific, basis. Commonly cited examples include naturopathy, chiropractic, herbals, traditional Chinese medicine, Unani, Ayurveda, meditation, yoga, biofeedback, hypnosis, homeopathy, acupuncture, and diet-based therapies, in addition to a range of other practices⁵.

CAM was described by National Institutes of Health (NIH), a panel to provide definition as "seeking, promoting, and treating health," but it was noted that the boundaries between CAM and other more dominant or conventional systems were not always clearly defined. The panel concluded that CAM's definition must remain flexible. The NCCAM classified alternative medical systems that are built upon a "complete system of ideas and practice" which include Ayurveda, Homeopathy, Chiropractic, Osteopathy, naturopathy, and Chinese medicine. Integrative medicine, as defined by NCCAM, combines mainstream medical therapies and CAM therapies for which there is some high-quality scientific evidence of safety and effectiveness⁶. Integrative holistic medicine include yoga, meditation, prayer⁴, biologically based therapies⁵, manipulation and body-based methods include massage, chiropractic manipulations⁷, energy therapies include qi qong⁸, Reiki⁹, therapeutic touch¹⁰ etc.

The objective of this study was to determine the prevalence and frequency of various CAM modalities, and also to find out the attitude and identify the factors which influence the use of CAM among by the population in Kedah state, Malaysia.

MATERIALS AND METHOD: A cross sectional survey was conducted to study and determine the prevalence and frequency of various CAM modalities that are being used by the population in Kedah state, Malaysia. The questionnaire was developed after a detailed review of relevant literatures. In addition, some novel questions were developed in accordance to the need of study objectives. The content of the questionnaire was validated among senior lecturers in the faculty of pharmacy, AIMST University and their feedback was incorporated into the final questionnaire.

The questionnaire consisted of three sections including the demographic details, with a total of 27 questions. The study was also approved by the Asian Institute of Medicine, Science and Technology (AIMST) University's research and ethics committee.

The survey was carried out for a period of 3 months, in various places around Sungai Petani town, Kedah state where people usually gathered (local bus station, shopping malls etc). The survey was carried out using the questionnaire as the tool which was prepared both in English and Bahasa Malaysia. Samples were randomly chosen and the questionnaire was distributed to the participants after getting their consent for participating in this study. The questionnaire contained three parts: Part A included the socio-demographic details, Part B on CAM usage and Part C on the respondent's beliefs about CAM use. The study excluded those respondents who were below 10 years of age and incompletely filled survey form. The survey data were statistically analyzed using SPSS statistical software package version 13. An independent t - test with the P-value below 0.05 was generally considered statistically significant, while 0.05 or greater indicates no difference between the study groups.

A 5-point Likert scale (strongly disagree to strongly agree) was used to assess respondents' attitude towards the use of CAM. The total score was 45. The score in the range of 0 to 22 was considered negative attitude and less likely to use CAM. The scores between 24 and 45 was considered as positive attitude and they were more likely to use CAM whereas score 23 was considered to be neutral.

RESULTS: A total of 571 survey forms were distributed and 560 completed survey forms were retrieved out of which the majority of the respondents were females 54.46% (n=305) than the males 45.54% (n=255) (Table 1). Most of the respondents (44.64%) fall under the age group of 21 to 30 years. Among the respondents 3.21% were uneducated, 57.32% had primary / secondary education, and 39.47% were graduates. Among the cultural influences, Malay culture had the major influence in CAM use and this is shown by the highest percentage (48.22%), followed by the Chinese (24.96%), Indian (17.37%), Western

(6.91%), aboriginal (1.35%), Thai culture (0.84%), and others (0.34%) (**Table 1**).

Majority of the respondents said that their health was in excellent condition (68.75%), while for others, their health conditions were good (21.25%), and fair (10.00%). Purpose of using CAM were analysed and found that it was used by the respondents for promoting health (23.13%), preventing illness (21.23%) and treating illness (20.72%). Regarding on how the respondents were introduced to CAM, majority of respondents (48.9%) claimed that they were introduced by their family members and/or friends followed by media (31.81%), CAM practitioners (9.48%) and other (9.81%) which include family physician, pharmacist, nurses etc. Regarding the frequency of natural products intake, the data reveal that 48.22% of the respondents use less frequently and 20.18% of the respondents use it daily. There were no significant differences noted in the p value or correlation (Table 1).

The types of CAM used by the study population were biological products (33.14%), spiritual therapies (14.20%), alternative medicines (22.26%) and others (30.40%) such as physical therapies and energy therapies (**Table 2**).

The biological products used include herbal drugs (34.69%), medicinal tea (32.72%), special diets (16.16%), animal parts (13.69%), and others (2.76%). The spiritual therapies used were mostly faith healing/prayer (49.39%), divination/incantation (8.28%), meditation (25.46%) and others (16.87%). The alternative medicine used by the respondents were mostly Malay medicine (39.73%) followed by Chinese medicine (29.94%), Indian medicine (11.35%), acupuncture (4.11%), homeopathy (8.81%) and others (6.07%). The physical therapies used by the respondents include chiropractics (2.39%), osteopathy (9.02%), massage/foot-reflexology (47.48%) and others (41.12%) such as yoga, Tai-Chi, Qi-gong etc. The energy therapies used mostly by the respondents were oxygen/ozone therapy (35.90%) and bio electro-magnetic therapy (18.97%). Other forms of CAMs used among the respondents includes scarification (34.13%), urine therapy (24.60%), black stone (19.05%), folk remedies (14.29%) and ritual sacrifice (7.94%) (Table 2).

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

Variable	Male	Female	No. of respondents	%
Age				
< 20	62	90	152	27.14
21-30	112	138	250	44.64
31-40	38	39	77	13.75
41-50	29	26	55	9.82
> 50	14	12	26	4.64
Total	255	305	560	100.00
Education Level				
Uneducated	13	5	18	3.21
Primary/ Secondary	155	166	321	57.32
Graduates	87	134	221	39.47
Total	255	305	560	100.00
Cultural Influences				
Malay	140	146	286	48.22
Chinese	65	83	148	24.96
India	39	64	103	17.37
Thai	3	2	5	0.84
Western	17	24	41	6.91
Aboriginal	2	6	8	1.35
Others	1	1	2	0.34
Total	267	226	593	100
Health Status of Respondents				
Excellent	180	205	385	68.75
Good	58	61	119	21.25
Fair	17	39	56	10.00
Total	255	305	560	100
Purpose of CAM use				
Preventing illness	55	69	124	21.23
Treating illness	54	67	121	20.72
Promote health	59	76	135	23.12
No significant use	96	108	204	34.93
Total	264	320	584	100
Methods of Introduction to CAM Use				
Friend & family	137	152	289	48.90
Media	79	109	188	31.81
CAM practitioner	29	27	56	9.48
Family doctor	18	14	32	5.41
Others	12	14	26	4.40
Total	275	316	591	100
Frequency of Natural Products Intake				
Less frequently	126	144	270	48.22
Daily	49	64	113	20.18
Weekly	37	40	77	13.75
Monthly	30	33	63	11.25
Yearly	13	24	37	6.61
Total	255	305	560	100

TABLE 2: TYPES OF CAM USED BY THE PARTICIPANTS

Variable	Male	Female	No. of respondents	%
Use of biological product therapy				
Herbal products	127	137	264	34.69
Animal's parts	50	54	104	13.67
Medicinal tea	116	133	249	32.72
Special diet	50	73	123	16.16
Others	11	10	21	2.76
Total	354	407	761	100.00
Use of spiritual therapy				
Faith healing/ Prayer	82	79	161	49.39
Divination/ Incantation	14	13	27	8.28
Meditation	38	45	83	25.46
Others	17	38	55	16.87
Total	151	175	326	100.00
Use of alternative therapy				
Malay medicine	97	106	203	39.73
Chinese medicine	74	79	153	29.94
Indian medicine	23	35	58	11.35
Acupuncture	12	9	21	4.11
Homeopathy	21	24	45	8.81
Others	14	17	31	6.07
Total	241	270	511	100.00
Use of physical therapy				
Chiropractic	5	4	9	2.39
Osteopathy	14	20	34	9.02
Massage/ foot reflexology	75	104	179	47.48
Others	60	95	155	41.12
Total	154	223	377	100.00
Use of energy therapy				
Bioelectro-magnetic	19	18	37	18.97
Oxygen/ Ozone treatment	32	38	70	35.90
Others	45	43	88	45.13
Total	96	99	195	100.00
Other forms of CAMs				
Scarification	20	23	43	34.13
Ritual Sacrifice	1	9	10	7.94
Urine therapy	16	15	31	24.60
Folk remedies	9	9	18	14.29
Black stone	13	11	24	19.05
Total	59	67	126	100.00

The respondent's belief on usage of CAM in their day to day life was also studied by providing nine sets of statements which included the likert scale assessment from strongly disagree to strongly agree. For the statement on 'CAM providers give good information towards maintaining a healthy lifestyle', it was found that 41.97% females, and 41.57% males agreed to the statement. The least response was for strongly disagree which was 0.98% and 1.57% among females and males respectively. For the statement on 'There are lesser side effects when taking natural remedies', it was found that 33.88% females, and 35.83% males agreed to the statement whereas the least response was for strongly disagree which was 3.95% and 3.15% among females and males respectively.

For the statement on 'Taking CAM is healthier, safer and more comfortable than other medications', it was found that 42.30% females, and 38.19% males stated that they haven't decided to the statement whereas the least response was for strongly disagree which was 3.28% and 0.39% among females and males respectively (**Table 3**).

Table 4 shows the response for the statement on 'People are more likely to use CAM if there were more CAM clinics', it was found that 34.43% and 38.98% females and males respectively agreed to the statement whereas the least response was for strongly disagree which was 1.97% and 2.36% among females and males respectively.

For the statement on ‘People are more confident to use CAM because CAM providers involve them in decision making regarding their healthcare’, it was found that 32.46% and 36.47% females and males respectively stated that they agree to the statement whereas the least response was for strongly disagree which was 2.30% and 1.57% among females and males respectively. For the statement on ‘CAM builds up the body’s own defence mechanisms and promotes self-healing’, it was found that 34.10% and 41.73% females and males respectively stated that they agree to the statement and the least response was for strongly disagree which was 2.95% and 1.18% among females and males respectively (Table 4).

For the statement, ‘The more knowledge a person has toward CAM, is more likely to use it’, it was found that 41.31% and 45.10% females and males

respectively stated that they agree to the statement whereas the least response was strongly disagree which was 1.31% and 0.78% among females and males respectively.

For the statement, ‘Family/friends/teachers can influence a person’s CAM usage’, it was found that 48.51% and 45.88% females and males respectively stated that they agree to the statement whereas the least response was for strongly disagree which was 0.66% and 1.96% females and males respectively. For the statement on ‘People who believe in physical, mental and spiritual aspects of health are more likely to use CAM’, it was found that 39.54% and 37.25% females and males respectively stated that they agree to the statement whereas the least response was for strongly disagree which was 2.29% and 2.35% females and males respectively (Table 5).

TABLE 3: PARTICIPANTS RESPONSE ON THE BELIEF OF USAGE OF CAM

Statement 1 - CAM providers give good information on maintaining a healthy lifestyle.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	0.66	0.00	1.64	0.78	8.52	9.02	13.44	9.02	5.25	5.10	29.51	23.92
21-30	0.33	1.18	3.93	1.96	16.72	12.16	20.00	20.78	4.26	8.24	45.25	44.31
31-40	0.00	0.39	1.31	1.57	4.26	5.10	5.25	4.31	2.62	3.53	13.44	14.90
41-50	0.00	0.00	0.00	0.78	2.95	4.31	1.97	5.10	2.62	1.18	7.54	11.37
> 50	0.00	0.00	0.66	0.00	1.97	1.57	1.31	2.35	0.33	1.57	4.26	5.49
Total	0.98	1.57	7.54	5.10	34.43	32.16	41.97	41.57	15.08	19.61	100	100
Statement 2: There are lesser side effects when taking natural remedies.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	2.30	1.18	6.25	3.54	6.25	6.69	10.20	6.30	4.28	6.30	29.28	24.02
21-30	1.32	0.39	7.89	7.09	14.14	11.42	13.49	18.90	8.55	6.69	45.39	44.49
31-40	0.33	0.79	1.97	3.15	2.63	4.72	5.26	3.94	2.63	2.36	12.83	14.96
41-50	0.00	0.79	1.64	2.36	1.64	3.54	2.96	2.76	2.30	1.57	8.55	11.02
> 50	0.00	0.00	0.00	0.39	1.64	0.39	1.97	3.94	0.33	0.79	3.95	5.51
Total	3.95	3.15	17.76	16.54	26.32	26.77	33.88	35.83	18.09	17.72	100	100
Statement 3: Taking CAM is healthier, safer and more comfortable than taking drugs given by a medical doctor.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	0.66	0.00	6.23	1.57	12.46	13.39	5.25	6.69	4.92	2.36	29.51	24.02
21-30	2.30	0.00	9.84	11.02	19.67	13.39	8.20	13.78	5.25	6.30	45.25	44.49
31-40	0.33	0.39	1.64	1.57	4.59	5.91	4.26	5.12	1.97	1.57	12.79	14.57
41-50	0.00	0.00	0.98	1.18	2.95	4.72	2.30	3.15	2.30	2.36	8.52	11.42
> 50	0.00	0.00	0.33	0.79	2.62	0.79	0.98	2.36	0.00	1.57	3.93	5.51
Total	3.28	0.39	19.02	16.14	42.30	38.19	20.98	31.10	14.43	14.17	100	100

F = Female, M = Male. All data's are given in percentage

TABLE 4: PARTICIPANTS RESPONSE ON THE BELIEF OF USAGE OF CAM

Statement 4: People are more likely to use CAM if there were more CAM clinics.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	0.66	0.79	2.30	1.18	10.16	9.45	9.51	8.27	6.89	3.54	29.51	23.23
21-30	0.66	1.57	6.23	5.51	15.41	12.99	13.11	16.93	9.84	7.48	45.25	44.49
31-40	0.66	0.00	0.66	1.57	3.93	4.72	5.57	5.91	1.97	3.15	12.79	15.35
41-50	0.00	0.00	1.31	1.18	2.30	3.15	4.26	4.72	0.66	2.36	8.52	11.42
> 50	0.00	0.00	0.98	0.39	0.98	0.39	1.97	3.15	0.00	1.57	3.93	5.51
Total	1.97	2.36	11.48	9.84	32.79	30.71	34.43	38.98	19.34	18.11	100	100
Statement 5: People are more confident in using CAM because CAM providers involve them in decision making regarding their health care.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	0.66	0.39	3.28	2.75	9.84	7.06	10.16	8.63	5.57	5.10	29.51	23.92
21-30	0.98	0.78	8.85	3.92	13.11	18.43	12.46	14.90	9.84	6.27	45.25	44.31
31-40	0.66	0.39	2.62	1.57	3.93	5.10	4.59	5.10%	0.98	2.75	12.79	14.90
41-50	0.00	0.00	0.98	1.57	2.30	2.35	3.28	5.49	1.97	1.96	8.52	11.37
> 50	0.00	0.0	0.00	0.39	1.64	1.18	1.97	2.35	0.33	1.57	3.93	5.49
Total	2.30	1.57	15.74	10.20	30.82	34.12	32.46	36.47	18.69	17.65	100	100
Statement 6: CAM builds up the body's own defences and promotes self-healing.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	1.31	0.39	2.95	1.18	8.52	11.42	10.49	8.66	6.23	2.36	29.51	24.02
21-30	0.98	0.79	3.28	5.12	15.41	11.81	14.43	19.69	11.15	7.09	45.25	44.49
31-40	0.66	0.00	1.31	1.97	3.61	4.72	4.26	5.51	2.95	2.76	12.79	14.96
41-50	0.00	0.00	0.98	0.39	1.31	2.36	3.61	5.51	2.62	2.76	8.52	11.02
> 50	0.00	0.00	0.00	1.18	1.97	0.79	1.31	2.36	0.66	1.18	3.93	5.51
Total	2.95	1.18	8.52	9.84	30.82	31.10	34.10	41.73	23.61	16.14	100	100

F = Female, M = Male. All data's are given in percentage

TABLE 5: PARTICIPANTS RESPONSE ON THE BELIEF OF USAGE OF CAM

Statement 7: The more knowledge a person has about CAM, the more likely he/she is to use it.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	0.33	0.78	0.66	0.78	7.54	8.63	13.77	9.80	7.21	3.92	29.51	23.92
21-30	0.98	0.00	3.93	3.53	10.82	10.98	17.38	20.78	12.13	9.41	45.25	44.71
31-40	0.00	0.00	2.30	0.00	2.62	4.71	4.92	6.67	2.95	3.14	12.79	14.51
41-50	0.00	0.00	0.66	0.00	1.97	4.31	3.61	4.71	2.30	2.75	8.52	11.76
> 50	0.00	0.00	0.00	0.78	1.97	0.00	1.64	3.14	0.33	1.18	3.93	5.10
Total	1.31	0.78	7.54	5.10	24.92	28.63	41.31	45.10	24.92	20.39	100	100

Statement 8: Family/friends/teachers can influence a person's CAM usage.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	0.33	1.18	1.98	1.57	5.61	6.27	12.87	8.24	8.58	6.67	29.37	23.92
21-30	0.33	0.39	2.64	0.78	8.25	11.37	22.44	21.57	11.55	10.20	45.21	44.31
31-40	0.00	0.39	1.65	1.96	1.65	2.35	6.93	6.67	2.64	3.53	12.87	14.90
41-50	0.00	0.00	0.33	0.39	1.32	1.96	4.29	5.88	2.64	3.14	8.58	11.37
> 50	0.00	0.00	0.33	0.39	1.32	0.00	1.98	3.53	0.33	1.57	3.96	5.49
Total	0.66	1.96	6.93	5.10	18.15	21.96	48.51	45.88	25.74	25.10	100	100

Statement 9: People who believe in the physical, mental and spiritual aspects of health are more likely to use CAM.												
Age	Strongly Disagree		Disagree		Haven't decided		Agree		Strongly Agree		Total %	
	F	M	F	M	F	M	F	M	F	M	F	M
< 20	0.65	1.57	0.33	0.78	8.82	9.80	13.07	6.67	6.54	5.10	29.41	23.92
21-30	0.98	0.39	3.27	3.92	11.11	14.12	16.34	16.86	13.40	9.02	45.10	44.31
31-40	0.65	0.39	0.65	0.39	3.92	3.53	5.56	7.06	1.96	3.53	12.75	14.90
41-50	0.00	0.00	0.98	0.78	3.59	3.53	2.61	4.3%	1.63	2.75	8.82	11.37
> 50	0.00	0.00	0.00	0.39	1.31	1.57	1.96	2.35	0.65	1.18	3.92	5.49
Total	2.29	2.35	5.23	6.27	28.76	32.55	39.54	37.25	24.18	21.57	100	100

F = Female, M = Male. All data's are given in percentage

Table 6 shows that 95.35% (534) of respondents scored between 24 and 45, and was considered to have a positive attitude toward CAM use.

TABLE 6: PEOPLE'S ATTITUDE TOWARDS CAM

Total Score	No. of people	Percentage
0-22	18	3.22
23	8	1.43
24-45	534	95.35
Total	560	100.00

Indication Score	
0-22	= Negative attitude and low likelihood to use CAM
23	= Neutral
24-45	= Positive attitude and higher likelihood to use CAM

DISCUSSION: In the present study, there was more number of female respondents (54.46%) than males (45.54%). Majority of the respondents (44.64%) were in the age group of 21 to 30 years and were found to be Malay (48.22%) followed by Chinese (24.96%) and Indians (17.37%).

Women are more likely to consult naturopaths, iridologists, and reflexologists than men¹¹. This finding could be related to the concept that female respondents of the present study have a positive attitude towards CAM and are more health conscious¹².

Females are more willing to try CAM because they are very health conscious whereas males are more likely to have a 'quick fix' approach towards their healthcare problem and usually don't take their health as a priority until and unless some illness has manifested. Study evidence suggests that people who use CAM tend to be female, of middle age and have more education¹³.

Students have a good health promoting lifestyle and good sense of coherence and studies also show that female students are more health conscious than male students¹⁴. Austin C *et al* believed from their studies that students are health conscious¹⁵.

A number of studies on women and CAM instantiate this general conceptualization of the CAM practitioner-patient relationship¹⁶. Many studies demonstrate the importance to women patients of being listened to, having more time than in biomedical consultations, and the emotional support being offered¹⁷⁻¹⁹.

The purpose of using CAM among the participants revealed that CAM was used for promoting health (23.12%), preventing illness (21.23%) and treating illness (20.72%), where as 34.93% respondents said that there was no significant use²⁰. The results show that the CAM was introduced to the participants by sources such as friends and family (48.90%) followed by media (31.31%).

The 48.22% of participants revealed that they used CAM less frequently, whereas the rest used daily, weekly, monthly or yearly. The types of CAM used by the population were biological products, spiritual therapies, alternative medicines and others such as physical therapies and energy therapies²¹.

According to the results, culture and religion also influenced a person's CAM use. As CAM involves spiritual therapies such as faith healing, meditation etc., these practices are highly influenced by religion and culture.

Studies have shown that religious involvement and spirituality are associated with better health outcomes, including longer life, improved coping skills, better health in general, and lower rates of anxiety, depression, and suicide²². Therefore, those who have a strong religious and cultural background are more likely to use CAM^{23, 24}.

In relation to the beliefs of the respondents about the use of CAM, it was found that majority of the responders scored 24 points or more (98.36%). This indicates that most of the respondents (including those between 21 and 30 years) have a positive attitude and higher likelihood to use CAM. This may be due to their exposure to factors such as religion, culture, family, friends etc.^{25, 26}. Sansgiry SS *et al* concluded in their study that Attitudes toward CAM vary significantly by generational influence²⁷.

Furthermore, from the survey, it is found that family, teachers and friends (n-289) have an influence in respondent's use of CAM. The majority of the respondents agreed that their friends and family influenced their decision to use CAM. Friends and family play a role in providing assistance with uncertainty around the decision-making process and informing about successful treatments for a specific problem.

Some respondents believe that the support for CAM by parents is rooted in personal beliefs regarding effectiveness, traditions and natural versus chemical approaches to health. Besides that, media (31.81%) also plays a vital role in introducing CAM to the respondents like internet, journals, magazines and radio²⁸. This is a clear indicator of the efforts put in by the local government in promoting the use of CAM to the public.

The reasons why respondents use CAM include: promoting health, preventing illness and treating illness. Majority of the respondents think that CAM is beneficial in terms of maintaining and promoting health. But when it comes to treating illness, especially the severe ones, they will reach out to modern medicine and CAM will be used as an adjunct.

However, there are some respondents who agree that they usually turn to CAM when the medicine given can't treat their illness. Most of the respondents agreed that CAM is useful to treat chronic disease as they have lesser side effects. Shorofi SA, reported in his study that the most common reason for using CAMs was that it fits into their way of life/philosophy' (26%) and also that majority of patients declared interest in and support for the hospital providing CAMs²⁹.

On the types of CAM used, it was found that most respondents used biological products (33.14%) and alternative systems (22.26%). Herbal products were the most popular among biological products (34.69%) and Malay medicine (39.73%) was the most popular alternative systems used. Shorofi SA and Arbon P reported in their study that the CAM domain most frequently used was biologically based therapies³⁰.

Other alternative systems with high usage were Chinese medicine (29.94%) and Indian medicine (11.35%). This may be because, these alternative systems are more established and has been used for generations, especially in the Malaysian scenario. Truant TL *et al*, concluded in their study that patients living with advanced cancer in Western countries frequently use CAM and there is a greater use of CAM which is associated with longer duration of disease, female gender, higher education, spiritual belief, younger age, psychological and physical symptoms, and dissatisfaction with conventional care³¹.

There were a total of 326 respondents with spiritual therapies/faith healing contributing to be the most popular choice among people (49.39%). The respondents who used spiritual therapies are highly exposed to religion who believes that health is a gift from God and one should always ask for their wellness through prayers.

As for physical therapies, massage is the most popular therapy (47.48%). This is because there are many cultural backgrounds in this region like those from Thailand and other parts of South East Asia who practice the art of healing through massage. Therapies such as yoga/tai-chi/qi-gong are also preferred (27.59%). Other physical therapies include chiropractic (2.39%), osteopathy (9.02%) etc. Energy therapies are not as popular as other therapies (8.49%), since these therapies are quite new and still in its infancy. There is a good chance that this form of therapy will gain more popularity in future, once more information regarding their benefits is provided to the public.

CONCLUSION: The main motive of CAM use was found to promote better health. This is a clear indication of the awareness of the population in this region to the importance of good health.

Most of the respondents believed in using CAM as first line medication, unless or otherwise the status of illness/disease deteriorated, did not show any improvement or developed into a more serious condition. Most users however, admitted for not informing their physicians about the usage of CAM. Participants used CAM because of perceived efficacy, naturally available, easy to get and people around them advised. Most of the participants were also oblivious to the fact that the Malaysian government has integrated the usage of CAM with modern medicine.

The use of CAM (especially alternative systems) should be accompanied by appropriate guidelines and information from health personnel. Users should notify their physicians if they are using any form of traditional medicine before he writes a prescription. It is also advisable to consult a physician and not entirely depend on CAM to treat or prevent any illness/diseases.

ACKNOWLEDGMENT: We wish to record our appreciation and sincere gratitude to the participants from the public for their valuable time, support and cooperation.

CONFLICT OF INTEREST: There is no conflict of interest.

REFERENCES:

1. Bratman' MD, Steven: The Alternative Medicine Sourcebook. Lowell House. 1997; 7. (ISBN 1565656261)
2. What is complementary and alternative medicine? National Center for complementary and alternative and Alternative Medicine. Available at <https://nccam.nih.gov/health/whatiscam>. Published October 2008. Updated July 2011.
3. John WS and Joseph JJ: Essential Issues in Complementary and Alternative Medicine. Complementary and Alternative Medicine: An Evidence-Based Approach. Mosby, Inc. 1999.
4. Christine AL: The Origins of Alternative Medicine. Alternative Medicine, Health and Medical Issues Today. Greenwood Press, Westport, Connecticut, 2007
5. Talcott P: The Learning of Social Role Expectations and the Mechanisms of Socialization of Motivation. Social System. Routledge, Taylor & Francis Group. 1951; Chapter VI, 138.
6. What Is Complementary and Alternative Medicine (CAM)? Available at <http://cim.ucdavis.edu/clubs/camsig/whatiscam.pdf>
7. <http://www.spine-health.com/treatment/chiropractic/chiropractic-manipulation>
8. <http://www.qigonghealing.com/qigong/benefits.html>
9. <http://www.reiki.org/faq/WhatIsReiki.html>

10. Clark PE and Clark MJ: Therapeutic touch: Is there a scientific basis for the practice? *Nursing Research*, 1984; 33(1):37-41.
11. MacLennan AH, Wilson DH and Taylor AW: Prevalence and cost of alternative medicine in Australia. *Lancet*, 1996; 347(9001):569-73.
12. Eisenberg DM, Davis RB, Ettner SL, Appel S, Wilkey S, Van Rompay M, Kessler RC: Trends in Alternative Medicine Use in the United States from 1990-1997: results of a follow-up national survey. *JAMA*, 1998; 280(18):1569-1575.
13. Bishop FL and Lewith GT: Who uses CAM? A narrative review of demographic characteristics and health factors associated with CAM use. *Evid Based Complement Alternat Med*. 2010 March; 7(1): 11–28. Published online 2008 March 13. doi: 10.1093/ecam/nen023.
14. Senjam S and Amarjeet S: Study of sense of coherence health promoting behaviour in north Indian students. *Indian Journal of Medical Research*, 2011; (134):645-652.
15. Austin C, Flood K, O'Keefe A, Reuter K. Health Consciousness of Siena Students. 5th Annual Siena College Student Conference in Business April 16, 2010.
16. Barry CA: The body, health and healing in alternative and integrated medicine: Ethnography of homeopathy in South London. Uxbridge: Unpublished PhD Thesis. Brunel University. 2003.
17. Anne S: "Homeopathy as a Feminist Form of Medicine." *Sociology of Health and Illness*, 1998; 20:191-214.
18. Eeva S: Recognition and the Creation of Wellbeing. *Sociology*, 2006; 40:493-510.
19. Nina N: Herbal Healthcare and Processes of Change: An Ethnographic Study of Contemporary Women's Practice and Use of Western Herbal Medicine in the UK: Unpublished PhD Thesis. The Open University. Milton Keynes. UK. 2008.
20. Tonya P: Complementary and alternative Medicine in the United States. *MPHP* 439, 4/2008, 7.
21. Tabish SA: Complementary and Alternative Healthcare: Is it Evidence-based? *International Journal of Health Sciences*, 2008; 2(1):VII-XI.
22. Mueller PS, Plevak DJ and Rummans TA: Religious involvement, spirituality, and medicine: implications for clinical practice. *Mayo Clinic Proceedings*, 2001; 76:1225.
23. Agrawal DP: Complementary and alternative medicine: an overview. *Current Science*, 2002; 82(5):518-524.
24. Eran BA, Efraim L, Yael K and Elad S: Integration of Herbal Medicine in Primary Care in Israel: A Jewish-Arab Cross-Cultural Perspective. *Evidence-Based Complementary and Alternative Medicine*, 2011; 2011:401395.
25. Singh V, Raidoo DM and Harries CS: The prevalence, patterns of usage and people's attitude towards complementary and alternative medicine (CAM) among the Indian community in Chatsworth, South Africa. *BioMed Central Complementary and Alternative Medicine*, 2004; 4:3.
26. Wubet B, Mirutse G and Tilahun T: The contribution of traditional healers' clinics to public health care system in Addis Ababa, Ethiopia: a cross-sectional study. *Journal of Ethnobiology and Ethnomedicine*, 2011; 7(1):39.
27. Sansgiry SS, Mhatre SK and Artani SM: Use of and attitude toward complementary and alternative medicine: understanding the role of generational influence. *Altern Ther Health Med*. 2013; 19(3):10-15.
28. Melissa C, Joannie S, Ronald A, Paul SA, Neil W, John G and Paul S: Use of complementary/alternative therapies by women with advanced-stage breast cancer. *BioMed Central Complementary and Alternative Medicine*, 2002; 2:8.
29. Shorofi SA: Complementary and alternative medicine (CAM) among hospitalised patients: reported use of CAM and reasons for use, CAM preferred during hospitalisation, and the socio-demographic determinants of CAM users. *Complement Ther Clin Pract*. 2011; 17(4):199-205.
30. Shorofi SA and Arbon P: Complementary and alternative medicine (CAM) among hospitalised patients: an Australian study. *Complement Ther Clin Pract*. 2010; 16(2):86-91.
31. Truant TL, Ross CB, Wong ME, and Hilario CT. Complementary and alternative medicine (CAM) use in advanced cancer: a systematic review. *The journal of supportive oncology*. 2013; 11(3): 105-113.

How to cite this article:

Sivadasan S, Ali AN, Lin LW, Balakrishnan D, Ramachandran S and Dhanaraj SA; Use of complementary and alternative medicine in the population of Kedah Darul Aman, Malaysia. *Int J Pharm Sci Res* 2014; 5(4): 1263-73. doi: 10.13040/IJPSR.0975-8232.5(4).1263-73

All © 2013 are reserved by International Journal of Pharmaceutical Sciences and Research. This Journal licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

This article can be downloaded to **ANDROID OS** based mobile. Scan QR Code using Code/Bar Scanner from your mobile. (Scanners are available on Google Playstore)