

Utilization of Complementary and Alternative Medicine among Middle Aged Adults of Bhaktapur

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ABSTRACT

Introduction: Complementary and Alternative Medicine (CAM) is becoming popular in all over the world for treatment of variety of health problems. Mostly middle-aged adults use it as they are at risk of developing non-communicable diseases. This study attempted to assess utilization of CAM among middle aged adults of Bhaktapur.

Methodology: A descriptive cross-sectional study was conducted among 107 middle aged adults (40-59 years) of Madhyapur Thimi, Ward 9 using non-probability purposive sampling method. Data was collected through structured interview schedule and analyzed by employing descriptive statistics in SPSS version 16 software.

Result: Whole medical system was the most commonly used CAM therapy which included Ayurved (60.7%) followed by Mind-body interventions i.e. Yoga (24.3%) and Meditation (8.4%). CAM therapies like yoga, massage therapy, meditation, reiki and heat therapy were obtained from respective CAM center only whereas ayurvedic and use of herbs were obtained from both centers and locally. All these therapies were mostly used on daily basis. Mostly used CAM therapies for treatment of health problems are Ayurved (100%), herbs (75%), massage (100%) and heat therapy (100%). People also used it for prevention, wellbeing and relaxation purposes. Most CAM users viewed CAM therapy as effective one, and about 94.4% respondents would like to recommend others to use these therapies as well.

Conclusion: Study concludes that people use variety of CAM on their daily basis which is very beneficial and effective for preventive and therapeutic purposes of different health conditions. There is a great importance to promote and strengthen the various CAM therapies to promote health of people.

Keywords: *Complementary and Alternative Medicine, Ayurveda, Whole Medical System*

INTRODUCTION

In today's world, the burden of non-communicable disease (NCD) like heart disease, chronic respiratory diseases, diabetes etc. is in increasing trend and are the leading cause of mortality. In 2016, among 56.9 million global deaths, 71% were due to NCD. In low- and middle-income countries, about 46% of death occurred due to NCD before age of 70. ¹

Similarly, to reduce this burden of NCD, WHO Global NCD Action Plan (2013-2020) focused for effective use of traditional medicine, treatments and practices, approximately based on circumstances in each country so as to strengthen national policies and health system. ²

National Center for Complementary and Alternative Medicine defined Complementary and Alternative Medicine

(CAM) as “a group of diverse medical and health care practices and products that are not presently considered to be part of conventional medicine”.³ If the CAM therapies are used instead of standard form of treatment, then, it is referred to as alternative medicine. But when it is used with the conventional form of medicine it is referred to as complementary medicine.⁴ The NCCAM has identified 5 domains or types of CAM therapies.

Mind body therapies includes Guided Imagery, Meditation, Prayer, Music Therapy, Light Therapy, Hypnosis, Story Telling, Biofeedback, Taichi, Qigong, Yoga etc.

Biologically based therapies include use of herbs and essential oils, special diets, nutritional and food supplements etc.

Manipulative and Body Based Methods involves applying pressure to or manipulating one or more body parts. It includes: Chiropractic Medicine, Massage etc.

Energy therapies includes: Healing Touch, Therapeutic Touch, Reiki, etc.

Whole medical system/ Alternative Medical System includes Traditional Chinese Medicine like Acupuncture, Chinese Herbs, Ayurvedic Medicine, Homeopathy, Naturopathy, etc.⁴

There is a long history of using traditional medicine for the wide health conditions.⁵ The use of CAM is rapidly increasing in developed countries.⁵ The CAM was found to be used in majority by middle aged adults.⁶⁻⁸

In Italy, one out of seven adults used CAM in last three years. Among the people who used these approaches, the common patterns were manual treatment (30.9%) followed by Homeopathy (22.1%) and herbal medicine (8.4%) The majority of users were satisfied with this CAM approaches i.e. acupuncture (60.6%), homeopathy (70.8%) herbal medicine (69.2%), manual treatments (77.8%).⁸ Only 46% of respondents used CAM in as study conducted in India.⁷ Most commonly used approaches were ayurvedic (71.73%) followed by homeopathy

(30.43%). People used these approaches for treatment of ailments like arthritis, chronic pain, diabetes mellitus etc.⁷

The Complementary and Alternative Medicine is also one of the holistic health interventions.⁹ About 80% of Nepalese people rely on CAM for primary health care because of accessibility and affordability. In Nepal, the number of center solely providing Ayurved, Homeopathy, Naturopathy, Acupuncture, Amchi and Unani are: 528, 51, 15, 8, 5 and 1 respectively. In province number 3, the number of center solely providing Ayurved, Homeopathy, Naturopathy, Acupuncture, and Amchi are: 150, 21, 10, 7 and 2. Here, most of the Government institutions practicing T&CM (Traditional and Complementary Medicine) were ayurvedic centers, however, no government institution that provide Naturopathy and Amchi System. Ayurveda is the most common practices followed by homeopathy in Nepal. It was used for the medical diseases like: gastritis, piles, fistula, rheumatoid arthritis, neurological problems, migraine, skin diseases, diabetes, hypertension etc.¹⁰

Furthermore, the study conducted in 52 CAM clinics of Pokhara Sub-metropolitan City among 501 patients revealed that the most frequently used approaches were Ayurveda (76.7%), Yoga (28.1%) and Homeopathy (22.6%). About 76.3% respondents had tried allopathic medicine before using CAM therapies for their similar health problem. About 61.5% used it due to belief in advantages of CAM practices whereas 56.3% had used it due to disappointment from allopathic medicines and 18.8% used it because of no other alternatives.⁶ And also, the study conducted in Kathmandu concluded that most (68.9%) of the people were satisfied highly with CAM and 62.9% of people use traditional medicine because of no improvement in modern medicine.¹¹

A study conducted among 426 stroke survivors in five rehabilitation centers of Kathmandu showed that about 74.9% stroke patient reported use of TCAM. Half (49.9%)

of them used both conventional treatments and TCAM therapies together. Majority of respondents (85.3%) used it for physical wellbeing while 51.7% used it to improve immune, 43.9% used it to relieve pain and 32.3% used it to control side effects of conventional medicine. Ninety two percent agreed that TCAM therapies had improved their health status.¹²

So, this study aims to explore the utilization pattern of the Complementary and Alternative medicine so that the weightage of use of different CAM can be known and further development in those respective CAM areas can be done in order to reduce this increasing occurrence of disease.

MATERIALS & METHODS

A descriptive cross-sectional study was conducted in ward 9 of Madhyapur Thimi Municipality, Bhaktapur, Nepal. The study population was middle-aged adults (40-59 years) who had used/using CAM within the last six months. Non-probability purposive sampling technique was used to select 107 respondents in this study. A structured interview schedule was developed with the help of a related literature which was divided into two parts, first part included socio-demographic data like age, gender, type of family, educational status, type of occupation and family income. Second part included questions related to utilization pattern of CAM. The validity of the instrument was done by consulting various books, reviewing literature and consulting with peers, and subject matter experts. Pre-testing the instrument was done on 10% of

the total sample size in a similar setting i.e., ward 8. The test instrument was prepared in the English version and translated to the Nepali language. Approval from research committee of MMIHS was obtained. Before data collection a written administrative approval was obtained from Madhyapur Thimi Municipality. The administrative officer was briefed about the objectives and the process of study for taking permission for data collection. Data collection was done from November 25, 2019 to December 25, 2019. The data collection was done by approaching the respondents from door to door. The respondents meeting criteria were selected and the introduction of the researcher was given. Data collection was done using a structured interview schedule by face-to-face interview. The respondents were explained clearly about the objective of the study. Informed verbal and written consent were taken before starting the interview. The respondents were made to participate voluntarily and provided full authority to withdraw from the study without fear and clarification. The interview took about 15–20 minutes. The confidentiality of data was maintained by using it only for the study purposes.

STATISTICAL ANALYSIS

Data was analyzed by employing descriptive statistics (Mean, Frequency, Standard deviation, Percentage). Data processing was done with the help of data analysis software i.e., statistical package for social science 16 version.

RESULT

TABLE 1: Socio-demographic Characteristics of Respondents n = 107

Characteristics	Frequency	Percentage (%)
Age		
40-49	62	57.9
50-59	45	42.05
Mean age in years \pm S.D.= 49.45 \pm 5.87		
Sex		
Female	74	69.2
Male	33	30.8
Type of Family		
Nuclear	67	62.6
Joint	37	34.6
Extended	3	2.8
Educational Status		
Illiterate	20	18.7

Literate	87	81.4
Informal Education	34	31.8
Primary level (1-5)	22	20.6
Secondary level (6-10)	22	20.6
Higher secondary level (11-12)	7	6.5
Bachelor and above	2	1.9
Employment Status		
Unemployed	41	38.3
Employed	66	61.7
Business	37	34.6
Farmer	16	15.0
Service	13	12.1
Monthly Family Income (Rs.)		
10,000-20,000	79	73.8
21,000-30,000	28	26.2
Adequacy of Monthly Income		
Adequate	96	89.7
Inadequate	11	10.3

Table 1 reveals that the overall mean and standard deviation of the age of the respondents under CAM was 49.45 ± 5.87 ranging from 40 to 59 years. About 57.9 % of them belong to the age group 40-49. Regarding sex, 69.2% of them were female. About 62.6% belong to a nuclear family. Concerning education status, 81.4% were

literate and 31.8% of them had attained an informal level of education. About 61.7% of the respondents were employed and involved in the business (34.6%). Most of the respondents (73.8%) had a monthly income of Rs. (10,000- 20,000). And, the majority (89.7%) of the respondents has an adequate family monthly income.

TABLE 2: Commonly Used Complementary and Alternative Medicine Therapy by Respondents within Six Months n = 107

Domains of CAM Therapy	Frequency	Percentage (%)
Whole Medical System		
Ayurved	65	60.7
Mind-body Interventions (n=35)		
Yoga	26	24.3
Meditation	9	8.4
Biologically Based Therapies		
Use of herbs	16	15
Manipulative And Body-Based Therapy (n=12)		
Massage Therapy	10	9.3
Heat therapy	2	1.9
Energy Therapies		
Reiki	2	1.9

* Multiple responses

Table 2 shows that the whole medical system which included Ayurved (60.7%) was the most commonly used CAM therapy followed by Mind-body interventions which included Yoga (24.3%) and Meditation (8.4%). And the energy therapy i.e., Reiki (1.9%) was used less.

TABLE 3: Place from where Complementary and Alternative Medicine Therapy was utilized by Respondents n = 107

CAM Therapy	Frequency	Percentage (%)
Ayurved (n=65)		
Ayurvedic center	62	95.3
Locally used	3	4.6
Yoga (n=26)		
Yoga center	26	100.0
Use of herbs (n=16)		
Jadibuti center	12	75.0
Locally used	4	25.0
Massage (n=10)		
Therapy Center	10	100.0
Meditation (n=9)		
Meditation center	9	100.0
Reiki therapy (n=2)		
Reiki center	2	100.0
Heat therapy (n=2)		
Therapy center	2	100.0

Table 3 shows that the respondents obtained their CAM services like yoga, massage therapy, meditation, reiki, and heat therapy from the respective CAM center only whereas ayurvedic and use of herbs were obtained from the centers as well as being

used locally too. In the case of ayurved, about 95.3% obtained services from the ayurvedic center and only 4.6% used locally and in the case of herbs, 75% used from the center and 25% used locally.

TABLE 4: Frequency of Use of Complementary and Alternative Medicine Therapy by Respondents n = 107

CAM Therapy	Timing of Use	Frequency	Percentage (%)
Ayurved(n=65)	Daily	63	96.9
	Once a day	8	12.3
	Twice a day	55	84.6
	Weekly (once)	2	3.1
Yoga (n=26)	Daily (Once)	24	92.4
	Weekly (Once)	1	3.8
	Irregular (Once at a time)	1	3.8
Use of herbs(n=16)	Daily	16	100.0
	Once a day	7	43.8
	Twice a day	9	56.2
Massage (n=10)	Daily (Once)	7	6.5
	Weekly (Once)	3	2.8
Meditation(n=9)	Daily	8	88.9
	Once a day	7	77.1
	Twice a day	1	11.8
	Weekly (Once)	1	11.1
Heat therapy(n=2)	Daily (Once)	2	100.0
Reiki (n=2)	Daily (Once)	1	50.0
	Monthly (Once)	1	50.0

Table 4 summarizes that the respondents used various CAM therapy on a daily, weekly, monthly and irregular basis. All therapies were mostly used daily i.e., Use of herbs (100%), Heat therapy (100%), Ayurved (96.9%), Yoga (92.4%),

Meditation (88.9%), Reiki (50%), Massage (6.5%). And, 3.8% of the yoga users had used the therapy irregularly. And, the least practiced reiki therapy was used on a daily and monthly basis.

TABLE 5: Reasons of Respondents for Using Complementary and Alternative Medicine Therapy n = 107

CAM therapy	Reasons	Frequency	Percentage (%)
Ayurved (n=65)	Treatment	65	100.0
	Prevention	2	3.07
Use of Herbs (n=16)	Treatment	13	81.2
	Prevention	3	18.7
Massage (n=10)	Treatment	10	100.0
Yoga (n=26)	Wellbeing	22	84.6
	Prevention	4	15.3
	Treatment	3	11.5
	Relaxation	2	7.6
Heat Therapy (n=2)	Treatment	2	100.0
	Relaxation	1	50.0
Reiki (n=2)	Relaxation	2	100.0
	Treatment	1	50.0
Meditation (n=9)	Wellbeing	6	66.6
	Prevention	2	22.2
	Relaxation	2	22.2

* Multiple responses

Table 5 illustrates that the majority of respondents used CAM (Ayurved, herbs, massage and heat therapy) for the treatment of various health problems. Besides treatment, people also used it for prevention,

wellbeing and relaxation purposes. Similarly, yoga (84.6%) and meditation (66.6%) were being used more for wellbeing.

TABLE 6: Utilization of Complementary and Alternative Medicine Therapy by respondents for Different Health Problems n = 107

Health problems	Frequency	Percentage (%)
Presence of health problems	80	74.7
Musculoskeletal pain	31	38.7
Gastritis	21	26.2
Cough and cold	6	7.5
Piles	5	6.2
Constipation	5	6.2
Fever	4	5.0
Sprain	3	3.7
Hypertension	3	3.7
Allergy	3	3.7
Others	11	13.7

* Multiple responses

Table 6 reveals that the three most common health problems for which the CAM therapy was used were for musculoskeletal system pain (38.7%), gastritis (26.2%) and cough and cold (7.5%).

TABLE 7: View of Respondents with Health Problems toward Usefulness of Complementary and Alternative Medicine and Allopathic medicine n = 80

Characteristics	Frequency	Percentage (%)
Use of CAM and allopathic medicine		
Used both	28	35.0
View regarding their usefulness (n=28)		
Both CAM therapy and allopathic medicine are Useful	11	39.3
Only CAM therapy is useful	10	35.7
Only Allopathic Medicine is useful	7	25.0

Table 7 shows that among 80 respondents who had mentioned health problems, 35% responded use of both CAM and allopathic medicine. Among them, 39.3% responded that both CAM and Allopathic medicine are useful.

TABLE 8: Respondent's View towards Effectiveness of Complementary and Alternative Medicine Therapy n = 107

CAM Therapy	Effective		Non-effective	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Ayurved (n=65)	57	87.6	8	12.3
Yoga (n=26)	26	100.0	-	-
Use of Herbs (n=16)	15	93.7	1	6.2
Massage (n=10)	10	100.0	-	-
Meditation (n=9)	9	100.0	-	-
Reiki (n=2)	2	100.0	-	-
Heat therapy (n=2)	2	100.0	-	-

Table 8 reveals that cent percent of the respondents (Yoga users, Meditation users, Massage users, Reiki users, and heat therapy users) had felt respective therapy as an effective one.

TABLE 9: Respondent's Reasons for Considering Complementary and Alternative Medicine Therapy as Effective Therapy

CAM Therapy	Reasons	Frequency	Percentage (%)
Ayurved (n=57)	Complete relief from health problems	49	85.9
	Lesser side effects	26	45.6
	Treat from root	16	28.07
Yoga (n=26)	Provide relaxation	18	69.2
	Provide pain relief	9	34.6
	Natural therapy	6	23.07
Use of herbs (n=15)	Maintains good health	5	19.2
	Relief from health problems	9	60.0
	Lesser side effects	6	40.0
Massage (n=10)	Natural therapy	5	33.3
	Relieve pain	10	100.0
	Meditation (n=9)	Provide relaxation	9
Reiki (n=2)	Provide relaxation	2	100.0
Heat therapy (n=2)	Relieves pain	2	100.0

*Multiple responses

Table 9 reveals the reasons for considering CAM therapy as an effective one. Mainly, the respondents of various CAM users responded CAM therapy as an effective one

as it relief from health problems. Besides that, the other reasons were: provide relaxation, lesser side effects, treat from root, natural therapy, etc.

TABLE 10: Respondent's Reasons for Considering Complementary and Alternative Medicine Therapy as Ineffective Therapy n = 9

CAM Therapy	Reasons	Frequency	Percentage (%)
Ayurved (n=8)	Takes a long time to Treat	4	50.0
	Not cured	4	50.0
	Expensive	2	25.0
Use of herbs (n=1)	Not cured	1	100.0

Multiple responses

Table 10 shows the reason for considering CAM as ineffective therapy. In the case of ayurved users, the main reasons were taking a long time for treatment (50%), notcured (50%) and expensive (25%). Similarly, in case of use of herbs, respondent felt itineffective as it didn't cure the health problems.

Negative Health Effects experienced by Respondents related to Complementary and Alternative Medicine Use

Cent percent of the respondents had no experience of negative health effects related toCAM use.

DISCUSSION

The current study highlights that the overall mean and standard deviation of the age of the respondents under CAM was 49.45 ± 5.87. Female CAM users are more than males. The majority (81.4%) of respondents were literate and about one-third (31.8%) of them had attained an informal level of education. About 61.7% of the respondents were employed with 34.6% of them involved in the business.

Regarding the utilization of CAM, the present study showed that the whole medical system was the most commonly used therapy in which the maximum use of Ayurved (60.7%) was found. A similar finding was found in the studies conducted in Pokhara, Nepal and Southern Rajasthan of India showed Ayurved as the most followed therapy.^{6,12} The alike result was exhibited in a study conducted in the Czech Republic that showed biologically based therapy was used more (71.4%) followed by manipulative and body-based therapies (20.8%).¹³ The higher use of Ayurved might be due to the fact that its popularity exists in Nepalese society since ancient times i.e., Vedic period (1500-800 BC) and also the use of CAM therapies varies from country to country depending upon their cultural beliefs and indigenous medicines prevalent.¹³

Likewise, in this study, cent percent of the CAM (yoga, massage, meditation, reiki, and heat therapy) users obtained their services from the respective CAM center only whereas Ayurveda and herbs were used locally as well as from the center. Regarding duration to reach the CAM center and hospital, this study revealed that about 70.1% of respondents took more than 30 minutes by walking to reach their respective CAM centers. In this study, the respondents used various CAM therapy on a daily, weekly, monthly and irregular basis whereas all therapies were mostly used daily. This finding is similar to the finding of the study conducted in 5 different rehabilitation centers of Kathmandu that showed most (66.1%) of the respondent used it daily.¹² But this finding was different from the study conducted in Lebanon that showed CAM products were irregularly used more.¹⁵ This difference might be because most of the respondents receive CAM services from CAM centers so there might be variation in the instruction, they received from service providers.

In this study, the majority of respondents used CAM therapy i.e., Ayurved (100%), herbs (75%), massage (100%) and heat therapy (100%) for treatment purposes. This finding was different from the study conducted in the Czech Republic that revealed majority (82%) of the respondents used CAM therapy for preventive purposes and only 15.9% of the users used it for therapeutic purposes.¹⁴ It might be because most people use health services when they have health problems. The most common health problems in this study for which

CAM therapy was used were for musculoskeletal pain, gastritis, cough and cold, piles, constipation, fever, sprain, hypertension, allergy, etc. This is similar to the finding of the study conducted in Rishikesh that showed respondents used CAM for cough and cold, gastrointestinal problems, musculoskeletal disorders, hair and skin problems and hypertension.¹⁶ Hence, it might be because they experienced effective outcomes for various health problems in the aspect of therapeutic and preventive aspects.

This study found that one third (35%) of the respondents had used allopathic medicine for various health problems besides CAM therapy. Among them, 39.3% responded both approaches i.e. CAM and Allopathic medicine are better whereas 35.7% responded only CAM therapy as a better one and 25% responded only allopathic medicine as a better one. This finding is similar to the study conducted in Gyeonggi Province, South Korea that revealed 45.3% revealed both CAM and conventional therapy effective while CAM users who thought only CAM therapy and only conventional therapy effective were equal.¹⁷

The current study reveals that the majority of CAM users had felt respective therapy as an effective one whereas only a few ayurvedic and herbs users felt it ineffective. This study corresponds with the study conducted in Rishikesh where 92% of CAM users were satisfied with CAM therapy as it was effective.¹⁶ Additionally, in this study, most people felt CAM effective because of the reasons like relief from health problems, lesser side effects, provides relaxation, lesser side effects, treat from root, natural therapy, etc. This finding is similar to the study conducted in Pokhara Sub-metropolitan City among 501 patients that showed the patient/respondents who are willing to advise other to use CAM reported benefitted from CAM (67.1%), natural therapy (29.6%), no side effects (24.5%) and cheaper therapy (8.5%).⁶ Moreover, this study revealed that all respondents had

no experience of negative health effects related to CAM use which is consistent with the previous study conducted in Rehabilitation centers of Kathmandu that showed 97.2% i.e., majority of users experienced no any side effects.¹² Thus, the respondents who felt therapy effective were more; it might be because of the good outcome from CAM use and also because of no experience of side effects. Similarly, in this study, the majority (94.4%) of respondents would like to recommend others as well to use CAM therapy that is consistent to study conducted in Pokhara Sub-metropolitan City which showed that majority (84.8%) of users would advise others too to use it for similar disease conditions.⁶ This might be because of effective outcome from CAM use.

CONCLUSION

Based on the findings, it can be concluded that the most commonly used CAM therapy was the whole medical system of CAM therapy i.e., Ayurved followed by mind-body interventions (yoga and meditation). CAM services like yoga, massage therapy, meditation, reiki, and heat therapy were used from the respective CAM center only whereas ayurved and herbs were used from centers as well as being used locally too. All these therapies were mostly used daily. CAM was used for treatment and prevention of different health problems, commonly in musculoskeletal pain, gastritis, cough and cold, etc. Besides these, CAM therapies were used for wellbeing and relaxation purposes too. Most CAM users felt the CAM therapy as an effective one as it helps them to get relief from their health problems with no experience of any side effects. Hence, there is great importance to promote and strengthen the CAM therapies for the better outcome of the health of people. This study helps to know about people's views on the outcomes of CAM use. Health personnel can facilitate the integrated use of CAM with allopathic medicine by respecting people's beliefs of effectiveness. This might ultimately help in promoting the

health of the people. Likewise, the findings from this study give us information about the usefulness of CAM in preventive and therapeutic aspects. This enables us to give proper counseling on using these treatment approaches and hence, facilitates for holistic nursing care. Furthermore, the findings of the study may serve as baseline data for future researchers. Awareness and the promotional program can be organized in a community setting regarding the use of various CAM therapies and its role in the prevention and management of various health problems so that it helps in further promotion of least used CAM therapies. The study sample was from only one setting, cross-sectional descriptive with small sample size, thus provide limited power to be generalized in all settings. As the finite population was unknown, non-probability purposive sampling was used in this study so there was a high chance of bias while selecting the sample. The community nurse can provide the care to people by integrating allopathic medicine with CAM therapies by considering its usefulness in therapeutic and preventive approaches.

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