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CLINICAL RESEARCH

Community Based Cross-sectional Study of the Knowledge, Attitude and Practice of Complementary and Alternative Medicine in Resources Limited Setting: A Case of Mettu Town, South Western of Ethiopia

Wakuma Wakene Jifar[1*], Bilise Teshome[1], Gemachis Melkamu[1], and Gebiso Roba Debele[2]

[1]*Department of pharmacy, College of Health science, Mattu University, Mettu, Ethiopia*
[2]*Department of Public Health, College of Health sciences, Mattu University, Mettu, Oromia, Ethiopia*

Correspondence should be addressed to Wakuma Wakene Jifar, Department of pharmacy, College of Health science, Mattu University, Mettu, Ethiopia

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ABSTRACT

BACKGROUND

Herbal medicines and remedies were the most commonly used Complementary and Alternative Medicine (CAM) therapies, together with homeopathy, vitamins/minerals, medicinal teas, spiritual therapies and relaxation techniques. In developing country like Ethiopia, traditional medicine has grown to be a significant source of healthcare. The proximity, reasonable cost, availability, familial pressure, and the positive perception of the community are the primary justifications for visiting a complementary and alternative medicine healer.

OBJECTIVE

The goal of the study was to evaluate the community of Mettu Town, South West Ethiopia's knowledge, attitudes, and use of complementary and alternative medicine.

METHODS

A community-based descriptive cross-sectional study including 285 individuals in Mettu town 03 kebele was conducted. To choose the households, a standardized random sampling method was utilized and house to house interviews were used to gather the data.

RESULTS

The 143 people (48.9%) of the participants were female and 94.9% of the respondents used complementary and alternative medicine, and 89% were aware of it. Medical herbalism was the most often used system (50.6%), and a higher percentage of study participants thought alternative medicine was less expensive than modern medicine (30.8%) and more accessible (42.5%).

CONCLUSION

The majority of the Mettu town Community practiced Complementary and Alternative Medicine therapy and the study participants in Mettu town have good knowledge but poor attitude regarding utilization of CAM. Keywords: Complementary and alternative medicine, Modern medicine, Traditional Medicine, Mettu town.

KEYWORDS

Traditional medicine; Homeopathy; HIV; Complementary and alternative medicine therapy; Patient-provider relationships

ABBREVIATION

AM: Alternative Medicinal Therapy; CAM: Complementary and Alternative Medicine; CNS: Central Nervous System; HM: Herbal Medicine; MM: Modern Medicine; TM: Traditional Medicine; TMP: Traditional Medical Practices; TRIPS: The Research Informed Practice Site; WHO: World Health Organization

INTRODUCTION

Traditional medicine (TM) is described by the World Health Organization (WHO) as "health practices, approaches, knowledge, and beliefs incorporating plant, animal, and mineral based medicine, spiritual, manual techniques, and exercises, used alone or in combination to treat, diagnose, and prevent illness, and to maintain well-being". According to the World Health Organisation the traditional healers have contributed to a broad spectrum of health care needs that include disease prevention, management and treatment of non-communicable diseases as well as mental and gerontological health problems [1]. Due to its inherent traits, distinct and holistic approaches, and accessibility, traditional medicine is still extensively accepted and used in the prevention and treatment of physical and mental problem as well as social imbalance in different country. For the vast majority of people on earth, especially those in rural parts of poor nations, it is still the best alternative treatment option [2,3]. As study reported, up to 66% of total healthcare costs in developing nations are spent on medications, and between 50% - 90% of these costs are incurred by the patient themselves. Additionally, 30% of the world's population and 50% of the most vulnerable populations in Asia and Africa still lack access to Modern medicine [4].

Many sections of Africa practice traditional medicine, including herbal medicine, massage, therapeutic dieting, fasting, hydrotherapy, and radiant healing therapy. However, it is very challenging to generalize about African traditional medicine due to the wide range of cultures, races, and geographic regions within Africa. Many Africans, especially those in rural regions, rely on traditional medicine despite the obstacles and rivalries it faces with modern medicine, not only for its therapeutic benefits and promotion of health and prosperity but also for their spiritual wellbeing [5,6]. Lack of a reference standard for calculating the right dosage of traditional medicine for patients is the biggest challenges that have been happened now days. Because of this, inaccurate and partial information regarding the medications used in traditional medicine has been produced [7]. Since it is a fundamental component of the local culture and is available to the majority of the population, traditional medicine appears to be used in the delivery of healthcare in every village, town, and city in Ethiopia [8,9]. The established laws and rules governing traditional medicine are insufficient and instead, cultural beliefs are connected to the users. Therefore, it is challenging to control traditional medicine through a national framework regarding its safety

and effectiveness utilizing various medicine categorizations and descriptions. As a result, traditional medicine is a crucial component of a community's identity and worth [10,11]. There were limited literature which discussed about the associated knowledge, attitude, and application of CAM in the Ethiopian country [12]. For instance, a study done in the Shirka district, Arsi Zone, revealed that 84% of traditional health practitioners supported the integration of modern medicine with traditional medicine to improve health care coverage in Ethiopia [13] and also another cross-sectional study was done in Jara Town, Bale Zone, and Southeast Ethiopia, where 96.3% of the respondents heard about traditional medicine, 43.91% of the respondents have planned to use traditional medicine in the future, 54.61% of the respondents believe that traditional medicines can cure diseases that are not cured by modern medicine, 63.6% suggest that herbal medicine users should consider herbal medicine is safe to use, 39.85% had positive attitude towards traditional medicine, 50.18% of the respondent accept traditional health practice, and 73.8% of the respondents have used traditional medicine at least once in their lifetime [14]. Furthermore, a cross-sectional study was done in Shopa Bultum, revealed that 69.53% of the participant had knowledge about more than three types of traditional medicines, and 71.52% preferred traditional medicine for its affordability, accessibility, and acceptability reason and also the study showed that medical herbalism was the most common traditional practice (79.47%), 35.76% of the respondents prefer to keep their knowledge as a secret and 72.85% of the respondents manage their acute/chronic illnesses by both self-medication and visiting traditional medicine practitioners, 36.42% of the respondents had good knowledge. In addition to that, 66.89% of the respondents were selecting both traditional medicine and modern medicine for curing illness and 79.47% of the respondents believe that traditional medicine can cure diseases better than modern medicine and the study also revealed 71.52% of the respondents prefer to visit traditional medicine practitioners first whenever they fall sick [1].

Ethno botanical is the basis for the majority of Ethiopian Traditional Medicine and abscess, arthritis, ascariasis, burns, colds, constipation, diabetes, dysentery, eclampsia, gastritis, gonorrhoea, heartburn, headache, leprosy, measles, rabies, rheumatism, scabies, syphilis, schistosomiasis, tinea, and toothache are a few conditions that are typically treated with medicinal plants and there may be a greater risk of unfavourable interactions with conventional drugs when these herbs and spices are used for therapeutic purposes. Due to the chemical makeup of these medications and the fact that they treat some of the most prevalent diseases among Ethiopian immigrants, the risk is heightened [14,15]. Thus, it is appropriate to evaluate CAM knowledge, attitudes, and practices in Mettu town in the current study so that the town administration and Oromia Regional Health Bureau can take the necessary controlling measures to ensure the quality and safety of the practices. The study will also give documented baseline data for the scientific community that may be used as a starting point for additional research projects such in vitro and in vivo studies, molecular elucidation, identification, and pharmacokinetic and pharmacodynamics profiles of secondary metabolites.

METHOD AND MATERIALS

Study Area and Study Period

The study was carried out in Mettu town which is located in Illu abba bora zone of Oromia regional state and the town of Mettu is situated 600 kilometers from Finfinne (Addis Ababa), Ethiopia's capital city, in the country's south-western region. There are 53,000 people living in Mettu, one of the 14 Woreda in the Illu aba bor zone, of

which 26,142 are men and 26,858 are women. There are three kebeles in the town (Mettu administration office 2017). One of the kebeles in Mettu town is the 03 kebele, which has 14905 houses and a population of about 18178 people. Mettu Town's entire land area is 68,723 hectares, and it has a tropical climate. With some foreigners settling in the town as early as the 1930s to purchase the crops from local farmers, Mettu has been a significant market for the coffee trade and the illu aba bor zone is the origin of world known coffee Arabica. The town has one referral hospital and one health center. The research was carried out between November and February 2021.

Study Design

A community based descriptive cross-sectional study design.

Population

All the households in Mettu town were the source population of the study and individuals aged greater than 18 years and living for at least six months in the kebele were study population. The sampling units were households, and the study units were adults available in the household during the interview.

Sample Size Determination and Sampling Technique

The sample size was determined using the following formula: assuming 95% confidence interval and 5% margin of error a prevalence of 23.83% to get possible minimum large sample size [16]. The required sample size of eligible participants for the study was determined by using single population proportion formula.

$$n = \frac{(Z\alpha/2)^2 \times p(1-p)}{d^2} = \frac{(1.96)^2 \times 0.2387(1-0.2387)}{(0.05)^2} = \frac{3.8416 \times 0.1817}{0.0025} = 279$$

So, total of 279 was calculated and since the number of populations was less than 10 000, the correction formula was used and by adding 10% for nonresponse rate, the final sample size became 285 study participants.

A systematic random sampling technique was used and the town is divided into kebele and a sample from 03 kebele was taken proportionally based on total number of households (14905) in 03 kebele. Sampling interval was determined by dividing the total number of house hold by sample size corresponding to that kebele and selecting the first study unit was done by using lottery method.

Study Variables

Knowledge, attitude and practice of CAM were dependent variable and Socio demographic status/factors

- Age, Sex, Educational status, religion
- Social factors
- peer influence and family income
- Cultural (related factors) - Relief, tradition and ethnicity were independent variable

Data Collection Tools, Data Analysis Procedures and Quality Control Method

Data were collected using structured interview administered questionnaire adapted from standardized questionnaires used by international organizations, national studies such as Ethiopian Demographic and Health Survey [17], and published articles in peer-reviewed journals [1,13,14,18,19]. A pre-test test was done on 14 person (5% of the sample population) outside of the study area to validate the consistency of the questions and

data collection tool and data collectors were briefed on the objective and relevance of the study on terms and how to collect the data using face-to-face interview.

Data was checked and cleared manually for analysis, which involves entering and coding manually using scientific calculator and manually tally sheet. The descriptive analysis such as percentages, frequency distribution and measures of central tendency were determined by computers and hand calculators and finally presented by using table and chart.

The questionnaire was translated to local language (Afaan Oromo) and back translated for purposes of ensuring the consistency of the questionnaire. The Principal Investigator also was ensured that he was presented at the site and cross check all questionnaires for completeness and correctness.

Ethical Considerations

This study was undertaken after the ethical clearance letter was obtained from ethical review committee of Department of pharmacy, college of health science, Mattu University. Permission was requested to Mettu town administration by a formal letter and Oral consent was asked from each participant of the study and the participants were informed that they can discontinue at any stage of the interview and all the participants who declared their willingness to participate were included in the study.

RESULTS

Socio Demographic Characteristics of Participants

The results of our survey indicate that there are 280 participants in total, of which 143 are women and 137 men, ranging in age from 18 to 28(37.5%), 29 to 39(39.2%), 40 to 50(13.5%), and >51(9.6%). Regarding Ethnicity, Oromo made up the majority of the 280 participants 195 (69.6%), followed by Amara 42 (15%). From 280 participants, 141(50.3%) were married and 125(44%) were single. There were 124(44.3%) participants with higher education, and 16(5.7%) without any formal education. Among the 280 participants, 117 (41.7%) were protestants, followed by 79(28.2%) orthodox, and 75(26.8%) Muslims. According to our survey, the majority of study participants work for the government, while 89(31.8%) and 66(23.6%) are business owners (Table 1).

Table 1: Socio demographic characteristics of Study participant on knowledge, attitude and practice of complementary and alternative medicine among people of Mettu-town, South West Ethiopia, 2021.

Variables	Category	Frequency	Percent (%)
Age in year	18-28	105	37.50%
	29-39	110	39.20%
	40-50	38	13.50%
	>51	27	9.60%
Sex	Male	137	48.90%
	Female	143	51.10%
Marital status	Married	141	50.30%
	Single	125	44.70%
	Divorced	11	3.90%
	Widowed	3	1.10%
Ethnicity	Oromo	195	69.60%
	Amara	42	15%
	Tigre	10	3.60%
	Gurage	25	8.90%
	Others	8	2.90%
Religion	Protestants	117	41.70%
	Orthodox	79	28.20%
	Muslims	75	26.8
	Catholic	1	0.40%
	Others	8	2.80%

Educational status	No formal education	16	5.70%
	Primary school	41	14.60%
	Secondary school	99	35.40%
	Higher education	124	44.30%
Occupational status	Unemployed	41	14.60%
	Government employed	89	31.80%
	Merchant	66	23.60%
	House wife	43	15.40%
	Others	41	14.60%
Monthly income	<500	31	11.20%
	500-1500	97	34.60%
	1500-2500	38	13.50%
	>2500	114	40.70%

Knowledge of Study Participants Towards Complementary and Alternative Medicine

About 273 (97.5%) of the total participants had knowledge of CAM, and of those, 138 (50.6%) are familiar with herbal medicine, 59 (21.6%) are familiar with spiritual/religious healing, and 52 (19%) are familiar with massage and bone setting. The majority of the respondents' information came from informal sources (family, friends, and others), and 178 (65.2%) of the participants were aware of the negative effects of CAM. Moreover, 66.3% of the participant said that utilization of TM may result in a death and 20.8% said it could induce diarrhoea side effect (Table 2).

Table 2: knowledge of study participants on CAM among community of Mettu town, South West of Ethiopia, 2021.

Variables	Category	Frequency	Percent (%)
Do you know other health care without modern medicine (MM)?	Yes	273	97.50%
	No	7	2.50%
What types of CAM do you know?	Medical herbalism	138	50.60%
	Spiritual /faith healing	59	21.60%
	Massage, Traditional bone setting	52	19%
	Others	24	8.80%
From where you got Source of information regarding CAM?	Formal	14	5.10%
	Informal	259	94.90%
Do you know adverse effect of CAM?	Yes	178	65.20%
	No	95	34.80%
What is the known adverse effect regarding CAM use?	Not known include death	118	66.30%
	Diarrhea	37	20.80%
	Skin rash	17	9.50%
	Vomiting	6	3.40%

Types of Disease Treated by CAM among Community of Mettu Town, Ethiopia

As can be seen from the results, the respondents stated that CAM can be used to treat a variety of diseases. According to respondents, other diseases treated by CAM include 7.3% evil eye, 26.7% rabies, 13.2% liver, and 30.8% bone fracture. This study found that 22 (8.1%) cases of heart disease, 79 (28.9%) cancer cases, and 112 (41%) cases of HIV/AIDS were among the diseases that CAM failed to cure (Table 3).

Table 3: Disease that treated by CAM among people of Mettu town, South West of Ethiopia, 2021.

What types of Disease treated by CAM?	Frequency	Percent (%)
Rabies	73	26.70%
Bone fracture	84	30.80%
Liver	36	13.20%
Evil eye	20	7.30%
Others	60	22%

Participants disagreed with traditional medicine's treatment of conditions including cancer (79, 59.3%), malaria (65, 21.5%), tuberculosis (30, 9.9%), and others (28, 9.3%) (Table 4).

Table 4: Disease that not cured by CAM among people of Mettu town, South West of Ethiopia, 2021.

What type of disease those fail to cure by CAM?	Frequency	Percent (%)

HIV /AIDS	112	41%
Cancer	79	28.90%
Heart disease	22	8.10%
Others	60	22%

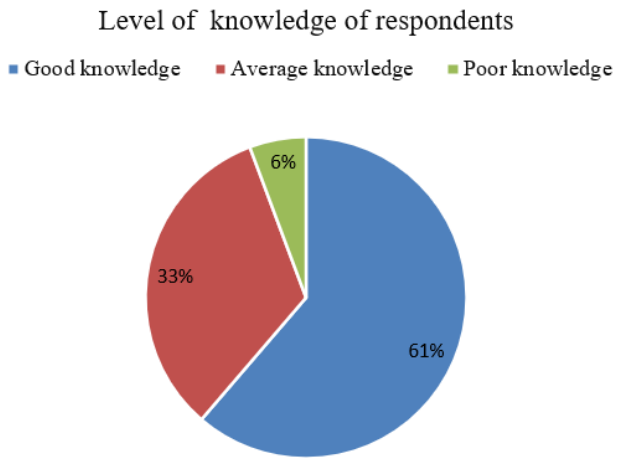

Figure 1: Level of knowledge of respondents among people of Mettu town, south west of Ethiopia, 2021.

Attitude of CAM Therapy among Study Participants

From total participants, 222 (80.3%) people strongly disagreed that CAM was more beneficial than MM in terms of effectiveness. Furthermore, the study revealed that, the majority of participants (60.8%) replied that complementary and alternative medicine (CAM) is not as safe as standard treatment and the majority of respondents, 48.3%, agreed that CAM should be integrated with MM. Moreover, the majority of the participants (43.6%), disagreed that CAM practitioners should be visited before MM, 52.3 of the participants agreed that CAM was less expensive than MM (Table 5).

Table 5: Attitude to CAM therapy by the respondents among people of Mettu town, South West of Ethiopia, 2021.

Questions regarding attitude to CAM		**Response**				
		Strongly disagree (1)	Disagree (2)	Not known (3)	Agree (4)	Strongly agree (5)
1. CAM is more effective than modern medicine?	Frequency	92	130	29	21	1
	Percent (%)	33.70%	46.60%	10.70%	7.70%	0.4
2. CAM is safer than MM?	Frequency	73	93	50	57	0
	Percent (%)	26.70%	34.10%	18.30%	20.90%	0
3. CAM should be integrated to MM?	Frequency	30	66	23	132	22
	Percent (%)	11%	24.20%	8.40%	48.30%	8.10%
4. Prefer first to visit CAM practitioner than MM?	Frequency	94	11900.00%	5	50	5
	Percent (%)	34.40%	44%	1.90%	18.30%	1.80%
5. Advise a sick person first to visit CAM practitioner?	Frequency	94	12200.00%	33	19	5
	Percent (%)	34.40%	44.80%	12.10%	6.90%	1.80%
6. CAM is more affordable than MM?	Frequency	10	3500.00%	37	143	48
	Percent (%)	3.70%	12.80%	13.60%	52.30%	17.60%

Practice of CAM among Mettu Town Respondents, Ethiopia

This study revealed that, 257 (94.1%) people had used CAM, and 175 (64.1%) had a history of using CAM during MM. Moreover, the majority of participants had only sporadically used CAM (78.4%). The responders who prefer CAM over MM cite 116 (42.5%) accessibility, 84 (30.8% affordability), and 21 (7.7%) effectiveness as their reasons to use CAM (Table 6).

Table 6: Practice of complementary and alternative medicine among respondent of Mettu town, South West of Ethiopia, 2021.

Questions regarding practice of CAM	Category	Frequency	Percent (%)
Are you practice CAM for treatment of disease?	Yes	245	89.70%
	No	28	10.30%
How frequently have you used CAM?	Once in life time	51	18.70%
	Occasionally	21400.00%	78.40%
	Always	8	2.90%
Do you Combined CAM with MM in your life time?	Yes	9800.00%	35.90%
	No	175	64.10%

Figure 2 below showed that the reasons of the respondents who prefer complementary and alternative medicine to modern medicine.

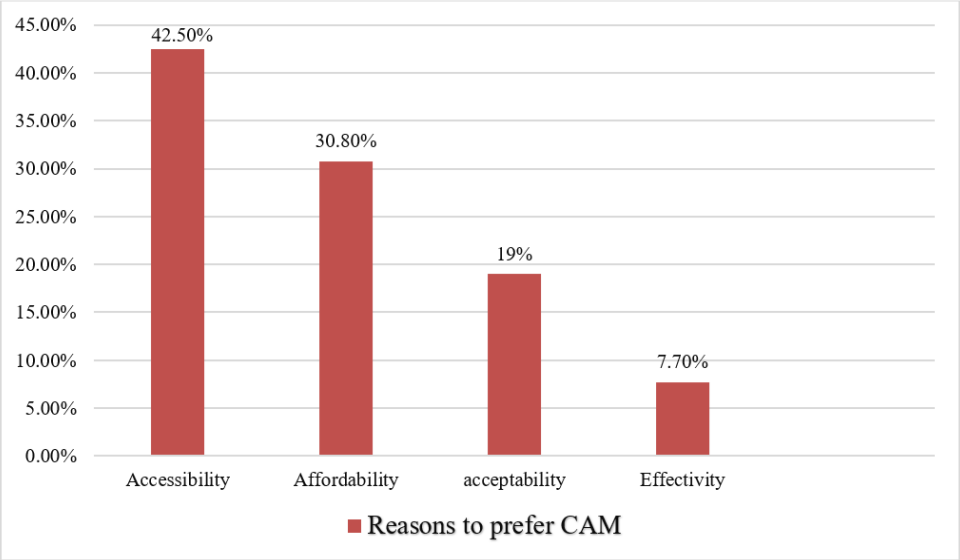

Figure 2: Reasons to prefer complementary and alternative medicine to modern medicine among community of Mettu town, South West of Ethiopia, 2021.

The most popular mode of administration is oral 130 (46.6%), followed by cutaneous or topical 84 (30.8%), and the leaf 158 (57.9%) is the most frequently utilized component of herbal medicine (Table 7).

Table 7: Distribution of part of herbal medicine and route of administration according to the respondents among community of Mettu town, South West of Ethiopia, 2021.

Question regarding parts and route of Administration for Herbal medicine	Category	Frequency	Percent (%)
What is the Commonest route of administration for herbal?	Oral	130	46.60%
	Dermal	84	30.80%
	Anal	0	0
	Others	59	21.60%
Which parts of herbal medicine commonly used in your area?	Leaf	158	57.90%
	Root	58	21.20%
	Seeds	34	12.50%
	Others	23	8.40%

DISCUSSION

The main purpose of this study is to identify gaps in knowledge, attitude and practice of CAM in Metu town. Identifying the gaps will help in educating the community about the benefit and adverse effect of traditional medicine. One of the main constraints to the growth of a modern African phytomedicine industry has also been identified as the lack of proper validation of traditional knowledge and also the lack of technical specifications

and quality control standards. This makes it extremely difficult for buyers, whether national or international, to evaluate the safety and efficacy of plants and extracts, or compare batches of products from different places or from year to year [20].

The reason for high utilization of traditional medicine in Ethiopia is due to limited access to healthcare, especially in rural areas and the others factors with regard to determinants of traditional medicine practice in Ethiopia, some literature studies also hypothetically linked the affordability of traditional medicine to the fact of its use by up to 80% of the population, while others added deprived access to modern healthcare facilities and also cultural belief, monthly income, and religious belief have also been mentioned as determinants for utilization of CAM [14]. Similar to that, the current study also revealed as there was high utilization (94.9%) of traditional medicine in the study area, this may be due to the Yayo Coffee Forest Biosphere Reserve is situated in south western of Ethiopia which is located near to the study area and the area plays a key role in the conservation of natural and cultural landscapes because of that the around community can access easily types of herbal medicine they need for treatment of human ailments [21]. It is hoped that the results of this study will encourage various stakeholders to get involved in this area and serve as a baseline for other studies that will be conducted in the future because there has been no previous study done in Mettu town and other regional kebeles in Ethiopia regarding CAM knowledge, practice, and attitudes. Planning for control measures against potential health risks from the misuse of alternative medical therapies will be extremely important. As a result, it would be crucial to evaluate community members' knowledge, attitudes, practices, and management of CAM. A significant portion of the community is using TM in general and medicinal plants in particular as one of the solutions for solving health problems in the research region. However, there is currently only minimal documentation of this indigenous therapeutic practice. In their research, Zein and Kloos reported making comparable observations [22,23]. Accordingly, the study's findings indicated that there were more men than women in the sample, with a higher percentage of men and given that the husband serves as the head of the home and that housewives are given the opportunity to interview the husbands, this is quite anticipated. Similar to research conducted in Nigeria, where 90.4% of respondents were aware of alternative ways of getting treatment, medicinal herbs and traditional bone settings were common among other forms of CAM, the forms of alternative medical therapies (AMT) that respondents were aware of included medicinal herbs (50.6%), and spiritual/faith healing (21.6%), among others [24]. When we compare the results of current study to the study carried out in Saudi Arabia, we found that 94.9% of the information regarding CAM came from informal sources (friends, family), which represents a difference of 46.5% and 46.3%, respectively. The main sources of CAM information were family members, friends, and the mass media, such as television, newspapers, and radio [25]. This may be because there aren't enough written or documented standards information concerning CAM as it was transmitted orally from generation to generation and the majority of respondents (65.2%) said that traditional medicine had side effects such skin rashes, vomiting, and diarrhoea as well as unidentified side effects (34.8%), no side effects (65.2%), and other users had unexplained side effects. But in a prior study in Nigeria, Lagos found that the majority of herbal medication users (79.2%) thought that herbal medicines had no side effects, whereas the remaining users (20.8%) had encountered one or more side effects [26].

In this study, respondents reported several conditions that were cured by CAM, including bone fracture (30.8%), rabies (26.7%), and evil eye (7.3%), while HIV, cancer, and heart disease were not successfully treated. Some of

the conditions CAM is used to treat in the study area are wounds, skin conditions, ascariasis, taeniasis, diarrhoea, constipation, toothache, snake bite, colds, ulcer, and evil eye. This outcome agrees with earlier research that has been published in Ethiopia [27]. This similarity of the result may be due to the fact that the development of therapeutic procedures closely parallels the course of diseases. According to our study, 89.7% of respondents used CAM, and 35.9% of respondents had a history of using CAM and conventional medicine simultaneously, which is in line with WHO findings that 80% of Ethiopians practice or use CAM, and that more than 80% of the population uses CAM in most African nations [28]. This similarity may result from the community's acceptance or idea that CAM is affordable and available of traditional medicine compare to modern medicine. Regarding knowledge of the respondents, 97.5% of respondents knew about CAM. The percentage of respondents, who utilized CAM in the Nigerian study, 90.4%, was less in this conclusion. That might be because there are more modern health care services available and because people are more aware about side effect of CAM may be the possible reason. According to the current study, easy accessibility and a 30.8% reduced cost were cited as the top reasons for using CAM by 116 (42.5%) participants, which was less than the 86.8% found in an Indian study [24] based on CAM's effectiveness when comparing the work done at, 80.3% disagreed that CAM was more successful than MM. This is more than the Nigerian study's findings, which indicated that 42% of respondents supported complementary and alternative medicine. Additionally, according to this study's respondents, 20.1%, they attend modern medical facilities soon after seeing practitioners of traditional medicine. When we compare this finding with research conducted in the Shirka district, it is lower [29]. This might be because CAM is so reasonably priced and people are afraid of its side effects.

With regard to route of administration for traditional medicine use, the majority of responders (46.6.8%) utilized CAM in oral form and on the surface (30.8%). A similar oral method (67.3%) and topical route (30.6%) of application have been described study conducted by Yirga and Zeraburk. The possible reason may be harvesting of traditional medicinal plants focused primarily on leaves and roots. For the production of medicines, the local population primarily employed leaves (57.9%), with roots accounting for the remaining 21.2%. Similar findings from ethnobotanical research conducted in another region of the country indicated that leaves (64.52%) and roots (19.35%) were mostly used in the treatment of a variety of health ailments [30,31].

CONCLUSION

The majority of the Mettu town Community practiced Complementary and Alternative Medicine theraphy and the study participants in Mettu town have good knowledge but poor attitude regarding utilization of CAM. Affordability, accessibility, and therapeutic effectiveness were reasons for preferring CAM compare to MM. The general community of Mettu town who use or seek TM need training or advice regarding utilization of traditional medicine and the heath care profession must do this because of the safety and effectiveness of the treatments utilized in TM are still mostly unknown and have not been tested to have met the gold standard therapy. Additionally, recommendation is, the local authorities, the government, and other sector stakeholders should regulate the actions of alternative medical practitioners and find a means to properly incorporate their techniques into contemporary medicine. Since responders were typically unaware of the requirements and adequate diagnoses were typically not established for the use of these products, regulations should be made also regarding the commercialization of alternative medicine and practices.

LIMITATION OF THE STUDY

The study's primary weaknesses were its relatively small sample size, cross-sectional design, single site, and inclusion of solely urban populations

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Data Sharing Statement

The corresponding author will provide the datasets used and/or analyzed during the current work upon reasonable request.

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Declaration of Conflicting Interests

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Informed Consent

Written informed consent was obtained from all participants before study conducted

Ethical Approval

Ethical approval for this study was obtained from, Ethics committee of Department of pharmacy, College of Health Science, Mattu University, with phar/1013/2021 approval number.

Authors' Contributions

BT and GM wrote the protocol and participated in data collection. WW and GR analyzed the data and wrote the manuscript. All authors read and approved the final manuscript.

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