

Attitude and practice toward traditional medicine among hypertensive patients on follow-up at Mizan–Tepi University Teaching Hospital, Southwest Ethiopia

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Abstract

Introduction: Traditional medicine has been used for the management of common mild conditions such as headache, diarrhea, and common cold as well as in the treatment of chronic diseases including hypertension. The usage of this medicine is regarded as acceptably safe with most Ethiopian people. Attitude and practices toward traditional medicine are crucial elements of hypertension control and its favorable outcome expectation. This study aimed at assessing the attitude and practice toward traditional medicine among hypertensive patients on follow-up at Mizan–Tepi University Teaching Hospital, Southwest Ethiopia.

Method: Facility-based cross-sectional study was conducted from 1st December 2020 to 30th December 2020 among 173 hypertensive patients. A consecutive sampling technique was used to select study participants. Data were collected through interviewer-administered structured questionnaire and analyzed using Statistical Package for the Social Sciences software version 23. Multivariable logistic regression analysis was done to identify the independent predictors of patients' attitude toward traditional medicine and their traditional medicine use at a p value ≤ 0.05 .

Results: Eighty-seven (50.29%) of the total 173 approached patients were found to have good attitude toward traditional medicine. Ninety-seven (56.07%) participants had used traditional medicine at least once in their lifetime and 45 (46.39%) patients used traditional medicine and modern medicine concomitantly. Participants' residence (adjusted odds ratio = 2.79, confidence interval = 1.01–7.74, p -value = 0.049) and educational status (adjusted odds ratio = 1.76, confidence interval = 1.61–5.09, p -value = 0.032) had significant association with attitude toward traditional medicine, while patients' age (adjusted odds ratio = 1.43, confidence interval = 1.32–4.96, p -value = 0.039), residence (adjusted odds ratio = 2.18, confidence interval = 1.10–4.32, p -value = 0.025), and occupation (adjusted odds ratio = 3.38, confidence interval = 1.55–7.38, p -value = 0.002) had significant association with their traditional medicine use.

Conclusion: Half of the study participants had good attitude toward traditional medicine, and nearly, one-fourth of the participants had practiced traditional medicine along with modern medicine. Health service providers should be aware of traditional medicine use and advise patients on the dosing of traditional medicine.

Keywords

Attitude, practice, traditional medicine, hypertension, Mizan–Tepi University Teaching Hospital

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Introduction

According to the World Health Organization,

“Traditional Medicine (TM) is the sum total of the knowledge, skill, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness.”¹

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Although modern medicine has become the mainstream medical practice since the 20th century, there is still high usage of TM globally. In developing countries, the prevalence of TM used to help meet primary healthcare needs ranged from 60% to 90%, while in developed countries such as the United States and Australia, the population who have used TM at least once ranged from 40% to 50%.² This medicine has been used for the management of mild conditions such as headache, diarrhea, and common cold as well as in the treatment of chronic diseases such as cancer, diabetes mellitus (DM), dyslipidemia, hypertension (HTN), and chronic kidney disease.^{3,4} The level of TM use in the treatment of HTN varies from country to country and from place to place within a country or state. Studies done in public clinics in Malaysia showed that there were 27% of hypertensive patients who had been on TM.^{4,5} A cross-sectional study from Baghdad, Iraq, also reported that the use of TM among hypertensive patients was 65.5%,⁶ while a scientific paper from Turkey showed 63.8% of hypertensive patients used TM.^{7,8} Twenty-one percent of participants of a study conducted in South Africa reported that they used TM to treat their HTN.⁹ A study from Nigeria also revealed that 39.1% of hypertensive patients used TM (mainly herbs).⁷

TM usage is regarded as acceptably safe with most Ethiopian people; about 80% of Ethiopian people rely on TM to meet their healthcare needs (including HTN control).¹⁰ As of other areas in the country, the population in Southwest Ethiopia used TM of different sources to treat the health problems experienced. This medicine was mainly extracted from plants/herbs even though the role of other sources like animals and minerals could not be undermined.^{11,12} Plants with family Fabaceae, Asteraceae, Lamiaceae, and Euphorbiaceae were the most commonly used in this area with their leaf, root, seed, leafy-stem, and bark regarded the main medicinal parts applied.^{13,14} The high usage of this medicine could be attributed to cultural acceptability, perceived efficacy against certain types of diseases, availability, and affordability as compared to modern medicine.^{10,15}

There is no doubt that the attitudes of patients have an impact on the management of their illness, as they can influence compliance, HTN control, morbidity, and mortality of the patients.¹⁶ It has also been revealed that attitude and practices toward TM are crucial elements of HTN control and its favorable outcome expectation.¹⁷ Despite such importance, studies conducted in Ethiopia so far focused on assessing the practice (utilization) of TM and associated attitude and practice in general population/patients rather than showing the usage of this medicine and associated attitude among hypertensive patients;^{10,18,19} studies done on attitude and practice toward TM among hypertensive patients in particular and efforts made to document the same among hypertensive patients in another way are almost null.²⁰ Therefore, this study aimed to assess this

issue among hypertensive patients on follow-up at Mizan–Tepi University Teaching Hospital (MTUTH), Southwest Ethiopia.

Methods

Study setting and period

Facility-based cross-sectional study was conducted among hypertensive patients on follow-up at MTUTH, Southwest Ethiopia from 1st December 2020 to 30th December 2020. The hospital is found in Bench Sheko zone, 574 km far from Addis Ababa, the capital city of Ethiopia. It is the only general hospital found in this zone and gives both inpatient and outpatient services for nearly 2 million catchment area population. The hospital had four major wards with 121 beds, namely medical (32 beds), surgical (22 beds), pediatrics (37 beds), and gynecology/obstetrics (30 beds). A total of 326 healthcare professionals (4 specialists, 57 physicians, 19 pharmacy professionals (pharmacists and druggists), 30 midwives, 22 public health officers, 138 nurses, 5 anesthesiologists, 1 psychiatrist, 21 laboratory professionals, 5 radiologists, 1 dentist, and 23 other health professions) in different disciplines were working in the hospital. DM, epilepsy, HIV/AIDS, and HTN were the main chronic cases treated at the hospital. The hospital had a total of 230 hypertensive patients on follow-up at the time this study was undertaken.²¹

Population

Source population. All hypertensive patients on follow-up at MTUTH were the source population.

Study population. All hypertensive patients on follow-up at MTUTH and who fulfilled the inclusion criteria were the study population.

Eligibility criteria

Inclusion criteria

1. Patients who can give information on their own (can hear and speak)
2. Patients with age 18 years and above.
3. Patients who were willing to participate in the study.

Exclusion criteria

1. Patients who were below 18 years of age.
2. Patients who had hearing and speaking difficulty.
3. Patients who were unwilling to participate in the study.

Sample size determination and sampling technique

The source population (i.e. 230 patients on follow-up at the ambulatory clinic of the hospital) was too small to make

sample size calculation; therefore, the investigators used consecutive sampling technique to include all hypertensive patients who fulfilled the inclusion criteria and came to the ambulatory clinic for services during the study period. The investigators finally interviewed 173 patients using the stated sampling technique; the analysis was based on these interviewed patients. Care was taken not to reinterview patients who were approached on the previous contact but revisited the facility during data collection.

Data collection methods and instruments

A structured questionnaire on attitude and practice toward TM was prepared based on literature^{10,22–24} and administered to the participants through exit interview (Supplemental material). The questionnaire consisted of sociodemographic characteristics of the participants (sex, age, marital status, residence, religion, ethnicity, level of education, occupation, income, length of time on HTN treatment follow-up, and price of TM and modern medicine), attitude-related questions, and TM-related questions. The attitude of the patients toward TM was assessed using a standardized 5-point Likert-type scale-based questions ranging from strongly disagree to strongly agree (1–5 points), while the practice of the patients toward TM was assessed using structured-type general questions.

Data quality control

The questionnaire was first prepared in English language and translated to Amharic and retranslated back to English to check the originality of the message. Pretest was done on 10 hypertensive patients (excluded from the actual data collection) in a similar setup before beginning the actual data collection to ensure the validity of data collection tool. The tools and procedures were then revised in light of the pretest made and data were collected. The collected data were checked by the principal investigator daily for completeness and data quality.

Data processing and analysis

The collected data were checked for completeness and entered into and analyzed using Statistical Package for the Social Sciences software version 23. Descriptive statistics were presented for different variables as necessary. The relationship between dependent variables (attitude toward TM, practice/use of TM) and independent variables (sex, age, marital status, residence, level of education, occupation, monthly income, length of time on HTN treatment follow-up, and price of modern medicine) was examined using binary logistic regression. To do this, participating patients were initially categorized into two groups based on the following variables: age (20–49 years and 50 years and above), marital status (not in marital union and married), level of education (illiterate and literate), occupation (governmental

and private), monthly income (≤ 1500 Ethiopian birr (ETB) and > 1500 ETB), length of time on follow-up (≤ 3 years and > 3 years), and price of modern medicine (≤ 150 ETB and > 150 ETB). The scores of each patient (on each attitude question) were summed up to get the score of each patient on all questions. The overall scores of the patients were then added up and divided by the number of patients interviewed (i.e. 173) to get the mean score. The mean score was then used as a cutoff point to classify patients' attitude toward TM as good and poor; those participants with attitude scores equal to the mean score and above the mean score were considered to have a good attitude toward TM and those with scores below the mean score were considered to have a poor attitude toward TM. Then, bivariate logistic regression analysis was conducted to identify variables that fit for multivariable logistic regression at p -value ≤ 0.25 . Finally, the multivariable logistic regression analysis was done to identify the independent predictors of patients' attitude toward TM and TM use. Variables with a p -value ≤ 0.05 in the multivariable logistic regression were considered as statistically significant predictors of attitude toward TM and TM use.

Results

Sociodemographic profiles of respondents

One hundred seventy-three of the total 230 hypertensive patients were interviewed regarding their attitude and practice toward TM. Eighty-seven (50.29%) of the respondents were females. The mean age of the participants was 53.51 years (SD=11.71, range: 22–82 years). Many of the study participants were 50 years and above, 117 (67.63%). One hundred fifteen (66.47%) of the respondents were married, while 94 (54.33%) lived in rural area. Majority of the study participants were orthodox, 66 (38.15%), and protestant, 53 (30.64%), in religion. Oromo, 62 (35.84%), and Amhara, 42 (24.28%), accounted higher number of participants' ethnic group. One hundred twenty (69.36%) of the study participants were literate and the occupation of the majority was private type, 121 (69.94%). Eighty-nine patients (51.45%) remained on follow-up at the ambulatory clinic for > 3 years. The monthly income of the participants ranged from 300 to 8500 ETB with a mean ETB 2626.40; ninety-six participants (63.16%) earned above 1500 ETB per month. Fifty-five patients (55.56%) spent 150 ETB and less on modern medicine per visit associated with their HTN treatment, while 25 (65.79%) participants spent 100 ETB and less on TM per visit for the same case (Table 1).

Attitude of hypertensive patients toward TM

Seventy (40.46%) of the study participants strongly disagreed on encouraging others to use TM, and 62 (35.84%) were neutral regarding HTN being cured by TM but not by modern medicine. Fifty-seven (32.95%) participants

Table 1. Sociodemographic profiles of hypertensive patients on follow-up at MTUTH, December 2020.

Variable		Frequency (%)
Sex	Male	86 (49.71)
	Female	87 (50.29)
Age (in years)	20–49	56 (32.37)
	50 and above	117 (67.63)
Marital status	Not in marital union ^a	58 (33.53)
	Married	115 (66.47)
Residence	Urban	79 (45.66)
	Rural	94 (54.33)
Religion	Orthodox	66 (38.15)
	Muslim	44 (25.43)
	Protestant	53 (30.64)
Ethnicity	Catholic	10 (5.78)
	Oromo	62 (35.84)
	Amhara	42 (24.28)
	Bench	25 (14.45)
	Tigre	17 (9.83)
	Kaffa	16 (9.25)
	Others ^b	11 (6.36)
Level of education	Illiterate	53 (30.64)
	Literate	120 (69.36)
Occupation	Governmental	52 (30.06)
	Private	121 (69.94)
Income per month (in ETB, <i>n</i> = 152)	≤ 1500	56 (36.84)
	> 1500	96 (63.16)
Length of time on follow-up (in years)	≤ 3	84 (48.55)
	> 3	89 (51.45)
Average price of modern medicine (per visit) (in ETB, <i>n</i> = 99)	≤ 150	55 (55.56)
	> 150	44 (44.44)
Average price of TM (per visit) (in ETB, <i>n</i> = 38)	≤ 100	25 (65.79)
	> 100	13 (34.21)

MTUTH: Mizan–Tepi University Teaching Hospital; ETB: Ethiopian birr; TM: traditional medicine.

^aSingle, divorced, and widowed.

^bWolaitta, Surma, Shaka, and Gurage.

Table 2. Attitude of hypertensive patients toward TM in MTUTH, December 2020.

	Frequency (%)				
	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Plan to use TM in the future	54 (31.21)	18 (10.40)	18 (10.40)	51 (29.48)	32 (18.50)
Agree to the usage of TM in the community	53 (30.64)	10 (5.78)	41 (23.70)	31 (17.92)	38 (21.97)
Encourage others to use TM	70 (40.46)	14 (8.09)	34 (19.65)	27 (15.61)	28 (16.18)
Hypertension is cured by TM but not by modern medicine	43 (24.85)	25 (14.45)	62 (35.84)	28 (16.18)	15 (8.67)
TM is safer than modern medicine	17 (9.83)	18 (10.40)	57 (32.95)	40 (23.12)	41 (23.70)
TM is more effective than modern medicine	29 (16.76)	19 (10.98)	52 (30.06)	36 (20.81)	37 (21.39)

TM: traditional medicine; MTUTH: Mizan–Tepi University Teaching Hospital.

remained neutral when asked about the safety of TM over modern medicine. Fifty-two (30.06%) participants also answered neutral when asked about the effectiveness of TM over modern medicine. Fifty-four (31.21%) of the participants strongly disagreed on their plan to use TM in the

future, and 53 (30.64%) strongly disagreed on the usage of TM in the community (Table 2).

The mean score of the participants' attitude toward TM was found to be 17.76 ± 6.84 . Eighty-seven participants (50.29%) were found to have good attitude toward TM

(had attitude score equal to the mean score and above the mean score) and 86 (49.71%) had a poor attitude toward TM (had attitude score below the mean score, Figure 1).

TM practice among hypertensive patients

Ninety-seven (56.07%) of the study participants had used TM at least once in their lifetime. They remained on TM for 1–14 years (mean = 2.92, SD = 2.69 years). The main reasons

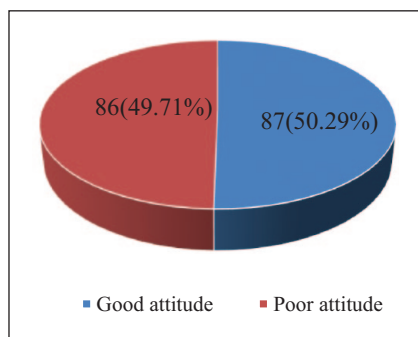


Figure 1. Attitude of hypertensive patients toward TM in MTUTH, December 2020.

for using TM were more potency and curing capacity, 40 (41.24%), and less toxic effects of the medicine than conventional medicine, 23 (23.71%). With regard to the source of TM used, 42 (43.29%) of the users prepared on their own, and 24 (24.74%) obtained from TM practitioners. All the used TMs were taken through oral route; majority of the users took in liquid form, 71 (73.19%), and 26 (26.80%) took in solid form. Of those who had ever used TM, 52 (53.61%) reported that they stopped using it currently (during data collection). Twenty-seven participants (60.00%) of the current TM users reported they did not experience adverse effect from the concomitant use of TM and modern medicine, while 18 (40.00%) patients reported they experienced adverse effects, mainly diarrhea, 11 (61.11%, Table 3).

Thirty-one (31.96%) of the TM users graded the TM they used as highly effective. Twenty-seven (27.83%) graded the TM they used as effective, while 25 (25.77%) graded it as moderately effective (Figure 2).

Factors associated with attitude toward TM

Sex and income of the participants showed *p*-value above 0.25 in bivariate analysis and hence excluded from the multivariable logistic regression. The multivariable logistic regression analysis indicated that participants' residence and

Table 3. TM practice among hypertensive patients on follow-up at MTUTH, December 2020.

Variable	Frequency (%)
Ever use of TM	Yes 97 (56.07)
	No 76 (43.93)
Length on TM (years, <i>n</i> = 97)	≤3 71 (73.19)
	>3 26 (26.80)
Reasons for using TM (<i>n</i> = 97)	Conventional drug is more expensive 18 (18.56)
	Service in health facilities is unsatisfactory facilities 7 (7.22)
	Conventional drugs are toxic or have serious side effects 23 (23.71)
	TM is more potent and curing 40 (41.24)
	Health facilities are inaccessible 5 (5.15)
	Others ^a 4 (4.12)
Source of TM used (<i>n</i> = 97)	Prepared on their own 42 (43.29)
	TM practitioner 24 (24.74)
	Neighbor 16 (16.49)
	Relative 15 (15.46)
Form of TM used (<i>n</i> = 97)	Liquid 71 (73.19)
	Solid 26 (26.80)
Current TM use (<i>n</i> = 97)	Using 45 (46.39)
	Not using 52 (53.61)
Adverse effect from the concomitant use of TM and modern medicine (<i>n</i> = 45)	Yes 18 (40.00)
	No 27 (60.00)
Types of adverse effect experienced from the concomitant use of TM and modern medicine (<i>n</i> = 18)	Skin rash 2 (11.11)
	Vomiting 5 (27.78)
	Diarrhea 11 (61.11)

MTUTH: Mizan–Tepi University Teaching Hospital; TM: traditional medicine.

^aFear of resistance from repeated use of modern medicine.

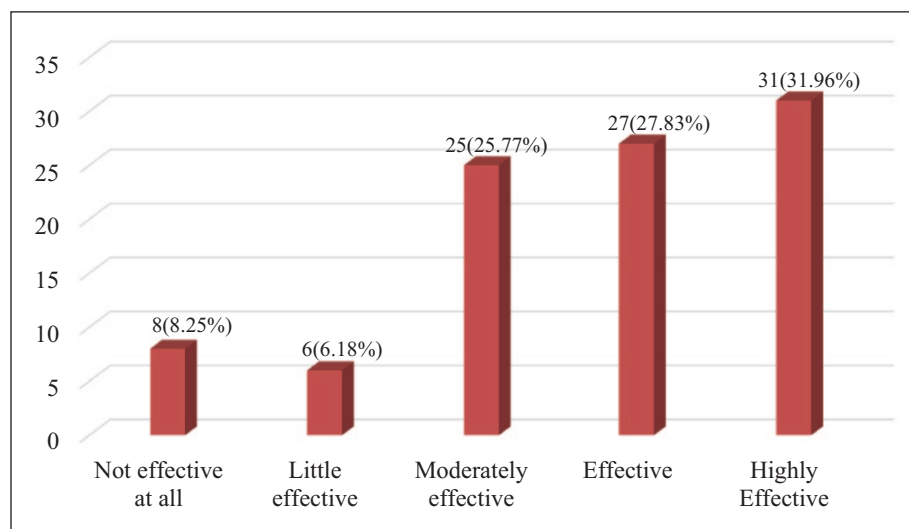


Figure 2. Effectiveness grade of TM used by hypertensive patients on follow-up at MTUTH, December 2020.

Table 4. Attitude toward TM and associated factors among hypertensive patients on follow-up at MTUTH, December 2020.

Variable	Attitude toward TM		95% CI		p-value
	Good, N (%)	Poor, N (%)	COR	AOR	
Age (in years)					
20–49	20 (35.71)	36 (64.28)	1	1	
50 and above	67 (57.26)	50 (42.73)	0.42 [0.22–0.80]	0.42 [0.14–1.28]	0.127
Marital status					
Not in marital union	23 (39.65)	35 (60.34)	1	1	
Married	64 (55.65)	51 (44.35)	0.52 [0.28–0.99]	0.21 [0.07–0.66]	0.007
Residence					
Urban	46 (58.23)	33 (41.77)	1	1	
Rural	41 (43.62)	53 (56.38)	1.80 [0.98–3.30]	2.79 [1.01–7.74]*	0.049
Level of education					
Illiterate	34 (64.15)	19 (35.85)	1	1	
Literate	53 (44.17)	67 (55.83)	2.26 [1.16–4.41]	1.76 [1.61–5.09]*	0.032
Occupation					
Governmental	33 (63.46)	19 (36.54)	0.46 [0.24–0.91]	0.35 [0.12–1.04]	0.059
Private	54 (44.63)	67 (55.37)	1	1	
Length of time on follow-up (in years)					
≤3	38 (45.24)	46 (54.76)	1	1	
>3	49 (55.06)	40 (44.94)	0.67 [0.37–1.23]	1.06 [0.40–2.78]	0.910
Price of modern medicine (in ETB)					
≤150	31 (56.36)	24 (43.64)	0.44 [0.20–0.99]	0.56 [0.22–1.45]	0.232
>150	16 (36.36)	28 (63.64)	1	1	

TM: traditional medicine; MTUTH: Mizan–Tepi University Teaching Hospital; CI: confidence interval; COR: crude odds ratio; AOR: adjusted odds ratio.

*Significant at p -value ≤ 0.05 .

educational status had a significant association with attitude toward TM. Respondents from the rural area were 2.79 times more likely to have a good attitude toward TM compared to urban residents (confidence interval (CI)=1.01–7.74, p -value=0.049). Literate participants were 1.76 times more likely to have good attitude toward TM compared to their counterpart (CI=1.61–5.09, p -value=0.032, (Table 4)).

Factors associated with TM use

Bivariate logistic regression analysis revealed that participants' sex, marital status, monthly income, and price of modern medicine had a p -value above 0.25, and, therefore, excluded from the multivariable logistic regression. The multivariable logistic regression analysis revealed that patients'

Table 5. TM use and associated factors among hypertensive patients on follow-up at MTUTH, December 2020.

Variable	Ever use of TM		95% CI		p-value
	Yes, N (%)	No, N (%)	COR	AOR	
Age (in years)					
20–49	22 (39.29)	34 (60.71)	1	1	
50 and above	75 (64.10)	42 (35.90)	2.76 [1.43–5.32]	1.43 [1.32–4.96]*	0.039
Residence					
Urban	49 (62.02)	30 (37.97)	1	1	
Rural	48 (51.06)	46 (48.94)	1.57 [0.85–2.88]	2.18 [1.10–4.32]*	0.025
Level of education					
Illiterate	37 (69.81)	16 (30.19)	0.43 [0.22–0.86]	0.62 [0.28–1.36]	0.230
Literate	60 (50.00)	60 (50.00)	1	1	
Occupation					
Governmental	38 (73.08)	14 (26.92)	1	1	
Private	59 (48.76)	62 (51.24)	2.85 [1.40–5.79]	3.38 [1.55–7.38]*	0.002
Length of time on follow-up (in years)					
≤3	41 (48.81)	43 (51.19)	1	1	
>3	56 (62.92)	33 (37.08)	0.56 [0.31–1.03]	0.75 [0.37–1.54]	0.434

MTUTH: Mizan–Tepi University Teaching Hospital; TM: traditional medicine; CI: confidence interval; COR: crude odds ratio; AOR: adjusted odds ratio.

*Significant at p -value ≤ 0.05 .

age, residence, and occupation had significant association with their TM use. Respondents with age 50 years and above were 1.43 times more likely users of TM compared to those who were below 50 years (CI=1.32–4.96, p -value=0.039). The odds of TM use among rural residents were 2.18 times higher than urban residents (CI=1.10–4.32, p -value=0.025). Participants with private occupation were at 3.38 times odd of using TM compared to government employees (CI=1.55–7.38, p -value=0.002, Table 5).

Discussion

TM is being widely used in the world by a number of patients with chronic conditions including HTN.^{25,26} This study assessed the attitude that hypertensive patients had toward TM and their practice of TM.

Attitude toward TM

The study revealed that 50.29% of participants had good attitude toward TM. This finding is higher compared to a study conducted in South Africa²⁷ and lower than a study from Baghdad, Iraq, where 80% of participants expressed a good attitude toward TM.⁶ Differences in the attitude of respondents between our study and the comparative studies might be due to the variation in acceptance/belief toward TM among population associated with the difference in length of time for which they relied on TM (historical TM use difference). Variation among countries in terms of the richness in TM and accessibility of modern medicine also may have influenced the attitude toward TM.

The current study showed that educational status and residence had significant association with patients' attitude

toward TM. Literate participants were more likely to show good attitude toward TM compared to illiterates similar to a study from Northern Ethiopia.²² Respondents from the rural area were more likely to have good attitude toward TM compared to urban residents and this might be attributed to more physical accessibility and affordability of TM than modern medicine in the rural area.^{10,15}

TM practice

The current study revealed that the prevalence of ever use of TM among study participants was 56.07%. This finding is higher than a study conducted in Addis Ababa, Ethiopia (51.7%),²⁸ Nigeria (39.1%),⁷ and South Africa (21%)⁹ but lower than a report from Turkey (63.8%).⁸ The variation between the findings of this study and the comparatives might be due to knowledge and attitude differences between the participants of the studies. The main reason reported by study participants for using TM in the current study was potency and curing capacity of TM (41.24%) and this is lower compared to a study from Addis Ababa, Ethiopia, in which 58.7% of participants reported potency as the main reason for their reliance on TM.²⁸ Dissimilar to the current study, a study conducted in Nigeria reported that many of the study participants (81.4%) used TM and the main reported reasons for using TM were lack of improvement on modern medicine (51.1%) and side effects experienced from modern medicine (13.5%).²⁹ Other study also reported perceived failure of modern medicines (31.73%), relatively high price of modern medicines (23.08%), social-cultural practices and/or herbal knowledge (20.19%), poor availability and affordability to medical facilities (19.23%), safety concerns about modern medicines (9.62%), and uncaring attitudes of

service providers (6.73%) as reasons for using TM.³⁰ Our study revealed that 43.3% of ever TM users prepared the medicine on their own, while 24.7% of TM users obtained from TM practitioners and this disagrees with a study conducted in Gondar town, Ethiopia, in which 37.6% of TM users obtained their medicine from the practitioners (herbalists) and 29% of TM users from relatives.³¹ All of the TM users (100%) used only oral route for taking their medicine in this study; majority in liquid form, 71 (73.19%), and this is higher compared to a study conducted Nekemte town, Western Ethiopia, where 53.85% of participants took oral liquid TM.³²

The current study indicated that 46.39% of ever TM users were practicing TM at the time of data collection. This finding is lower compared to a study from India (63.9%),³³ Morocco (80%),³⁴ and Palestine (85.7%).³⁵ It is also lower than a study conducted in Shopa Bultum (79.47%)¹⁹ and Gondar town (67.8%),³¹ Ethiopia. The lower finding in the current study might be due to more promotion, availability, and affordability of modern medicine in the community even though TM has cultural acceptability, perceived efficacy against certain types of health problems, and accessibility as compared to modern medicine.¹⁵ Difference in sample size between this study and the comparatives could also be a reason. The current finding is, however, higher than the finding of a study conducted in the United States (40%),³⁶ Nigeria (39.1%),⁷ Ghana (19.5%),³⁷ South Africa (21%),⁹ and Australia (48.5%).³⁸ The variations in the practice of TM across studies might come from the differences in sociocultural background, accessibility of modern medical practice, and perceptions of the importance of TM. Eighteen (40.00%) participants reported they had experienced adverse effects from the current concomitant use of TM and modern medicine unlike study from Malaysia where only 1.5% of participants experienced adverse effects from the concomitant use³⁹ and report from Gondar, Northern Ethiopia, where 20.1% of users experienced the same from the concomitant use of TM and modern medicine.³¹ Diarrhea, the most commonly reported adverse effect in this study, 11 (61.11%), is higher compared to a study from Nekemte town, Western Ethiopia, where 36.64% of TM users reported diarrhea as the main adverse effect from the two medicines used together.³² Presence/absence of a comorbid condition, lifestyle factors, and difference in type and dose of treatments prescribed might be reasons for the variation in adverse effect prevalence among the studies.

Our study revealed that age, residence, and occupation were significantly associated with patients' TM use. The same pattern has been reported with respect to age and occupation in another study, while no difference was noted in medicine use between rural and urban residents.^{39,40} The more likelihood of the practice of TM in rural population compared to urban residents in the current study (adjusted odds ratio (AOR)=2.18, CI=1.10–4.32, *p*-value=0.025) agrees with a study reporting the same finding in Northern

Ethiopia.³¹ The more concentration of different TM types in the rural area and the reduced accessibility of modern medicine to the rural population might be a reason for the higher likelihood of the utilization of TM among rural residents in this study.^{15,41} Other studies reported no difference in TM use between different age groups^{31,37,42,43} unlike this study that revealed patients aged 50 years and above to be more likely users of TM compared to those patients aged below 50 years (AOR=1.43, CI=1.32–4.96, *p*-value=0.039). The higher likelihood of using TM with increased age might be associated with an increased chance of catching chronic health problems including HTN with increased age^{44,45} which in turn increases the likelihood of going for extra treatments including TM.^{43,46,47}

Limitations of the study

The study does not show a causal relationship because the design was a cross-sectional study design. The participants might not exactly remember their TM practice history and therefore might have introduced recall bias to the study. Social desirability bias from patients' side and lack of power analysis/sample size calculation could also be additional limitations.

Conclusion and recommendation

Half of the study participants had good attitude toward TM, and nearly one-fourth of the participants had practiced TM along with modern medicine. Health service providers should be aware of TM use and advise patients on the dosing of TM and the potential of TM-prescribed medicine interactions.

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Informed consent

Written informed consent was obtained from all subjects before the study.

Ethical approval

Ethical approval for this study was obtained from the Research and Ethics Committee of School of Pharmacy, Mizan–Tepi University (Phar/0036/2013).

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Supplemental material

Supplemental material for this article is available online.

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