

## Prevalence and Factors Associated with Parental Traditional Medicine Use for Children in Motta Town, Amhara Regional State, Ethiopia, 2014

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### Abstract

**Background:** Traditional medicine is the ancient and culture bound medical practice which existed in human societies before the application of modern science to health. Around 80% of Ethiopians relies on traditional medicines. Although some traditional medical practices in children are useful and contributing positively and need to be strengthened, some are harmful from the perspective of health. In Ethiopia, studies conducted so far are very limited and focused on adults. As a result, this study was conducted to assess the prevalence and factors associated with parental traditional medicine practice for children.

**Objective:** The aim of this study was to assess prevalence and factors associated with parental traditional medicine use for children in Motta Town.

**Methods:** Community based cross-sectional study design was used. Data was collected using structured interviewer administered questionnaire. The study was conducted among 381 households selected using systematic random sampling method. Both descriptive and inferential statistics were used to present the data. Odds ratio, binary and multiple logistic regression were used to assess the association between dependent and independent variables.

**Result:** It was found that 88.2% of parents had used either forms of traditional medicine for their children. The top therapies used were herbs (66.9%), religious therapies (52.8%), massage (22.8%), bone settler (21.8%) and traditional birth attendants (13.1%). Female parents, low educational level, accessibility of traditional medicine, low price and perceived effectiveness were significantly associated with parental traditional medicine use for children.

**Conclusion and recommendation:** There was high parental traditional medicine practice for children in this study. Female parents, low educational status, easily accessibility, cheap in price and perceived effectiveness were significant predictors. The integration of traditional medicine as part of modern medicine and controlling mechanism should be strengthened. Community education and further research on its efficacy and safety should also be done.

**Keywords:** Traditional medicine; Parent; Children; Motta; Ethiopia

### Abbreviations:

AOR: Adjusted Odds Ratio; ASD: Autism Spectrum Disorder; CAM: Complementary and Alternative Medicine; CI: Confidence Interval; COR: Crude Odds Ratio; HEW's: Health Extension Workers; MDG: Millennium Development Goal; SPSS: Statistical Package for Social science; TM: Traditional Medicine; USA: United States of America; WHO: World Health Organization.

### Introduction

World Health Organization (WHO) defines traditional medicine as diverse health practices, approaches, knowledge and beliefs incorporating plant, animal, and/or mineral based medicines, spiritual therapies, manual techniques and exercises applied singularly or in combination to maintain well-being, prevent illness as well as to diagnose and treat illness [1].

In Asia and Latin America, for example, population continues to use traditional medicine. In China, traditional medicine accounts for around 40% of all health care delivered. On the other hand, up to 80% of people in Africa use traditional medicine to meet their health care needs [1]. Ethiopian people have been using traditional medicine since time immemorial. Around 80% of its population relies on traditional medicines [2].

There are many factors that push people to rely on traditional, complementary and alternative medicine all over the world in recent times. Because it is easily accessible, more affordable, closely corresponds to the patients ideology and less paternalistic than modern medicine, the appeal of traditional, complementary and alternative medicine increases [3].

Irrational use of medicine is a major problem worldwide. It is estimated that more than half of all medicines are prescribed, dispensed or sold inappropriately and that half of all patients fail to take them correctly. This contributes to enormous health and economic impacts both at a personal and national level [4]. As a result,

pediatric use of complementary and alternative medicine (CAM) therapies raises legal as well as clinical concerns [5].

Children are dependent on their parents. They cannot fight for their health rights. And some traditional practices like harmful traditional health practices were found to be killing practices for children. These practices are violating the children's health rights and hindering the country from achieving millennium development goal (MDG 4) [6].

Even though the use of traditional complementary and alternative therapies in children has recently shown explosive growth, there is little scientific evidence of benefit, a need for better regulatory oversight, and continuing gaps in the knowledge and attitudes of pediatric health professionals [7].

In Ethiopia, studies conducted so far are very limited and focused on adult traditional medical practices. The use of traditional medicine has not been widely studied among children. Therefore, this cross-sectional study was conducted to assess prevalence and predictors of parental traditional medicine use for children. So determining the rational of increased childhood traditional medicine utilization has paramount importance and it will fill the gaps in this regard.

## Objectives

**General objective:** To assess the prevalence and factors associated with parental traditional medicine use for children in Motta town, Amhara Regional State, Ethiopia, 2014.

**Specific objective:** To determine the prevalence of parental traditional medicine use for children for the last twelve months. To identify factors associated with parental traditional medicine use for children

## Methods and Materials

**Study area:** The study was conducted in Motta town which is found in East Gojjam Zone, Amhara region of Ethiopia.

**Study design:** Community based cross-sectional study design was used.

**Study period:** The data was collected from March to April/2014.

**Source population:** All parents having under eighteen years of age children who live in Motta Town.

**Study population:** All randomly selected parents having under eighteen years of old children who fulfill the inclusion criteria were included.

**Inclusion criteria:** Parents who were permanent residents at least for six months have under eighteen years old children who live with them at least for six months. Available at the time of data collection were included.

**Exclusion criteria:** Parents who were seriously ill or unable to give the required information during data collection period were excluded.

**Sample size:** A total of 381 households were included in this study.

**Sampling procedure:** Study populations (parents having under eighteen years old children) were selected using systematic sampling technique.

## Instrument and measurement

The data collection tool was a structured interviewer administered questionnaires. Either the father or mother of the children was interviewed. But priority was given for the mother because mothers are close to their children than fathers. Structured interviewer administered questionnaires adapted and modified from previous researches done on similar topics [8-11] and was translated in to the local language (Amharic). The questionnaire consists of five parts. The first part consisted of predisposing factors. Under this part, the questionnaire dealt about parental socio demographic characteristics and value - believe systems. The second part comprised of prevalence of utilization of TM. The third part of the questionnaire comprised enabling factors. The fourth part of the questionnaire was about need factors and the last section was regarding health care experience.

## Personnel

Eight health extension workers (HEWs) were involved in the data collection.

## Data quality control

Data collectors (HEWs) were trained on how to interview and record and assigned out of their respective kebeles to minimize information bias. In order to assess the validity and reliability of the instrument, clarity of the questions and respondent reaction to the question and interviewer, pre-test was done in another kebeles at 5% of actual respondents. After the pre-test unclear questions were collected and interviewers adjusted themselves as required. But the data from the pre-test was not included in the analysis. When the head of household (mother/father) was unavailable during data collection period, repeated trials until three times were done. During the data collection time, regular monitoring and supervision of the overall activity was done by the supervisors and principal investigator to ensure the quality of data.

## Data processing and analysis

The data was cleaned, coded and entered in Epi data version 3.1 and transferred to SPSS version 20.0 for analysis. Finally, descriptive and inferential statistics were used to summarize the data.

## Variables

**Dependent variable:** Parental traditional medicine use for children

**Independent variables:** Predisposing Factors such as socio demographic characteristics of parents (age, sex, religion, marital status, economic level, education, family size and resident). Enabling Factors (cost, accessibility and source of referral). Need Factors (conditions such as promotion, prevention and treatment, type of illness, perception of illness and parental rating of child health). Health Care Experience (parental CAM use, dissatisfaction with modern medicine, efficacy of CAM, fear of side effect of modern medicine and cost of modern medicine) (Table 1).

## Ethical consideration

Ethical approval and clearance to conduct this research were obtained from Research and Ethical Review Committee of Department of Nursing and Midwifery, School of Allied Health Sciences, College of Health Science, Addis Ababa University. Permission to conduct the

study was also requested from Motta Town Administration. Voluntariness was asked and signed on the consent form. The aim of the study was explained and participants were informed about confidentiality of the data.

## Result

### Prevalence of traditional medicine utilization for children

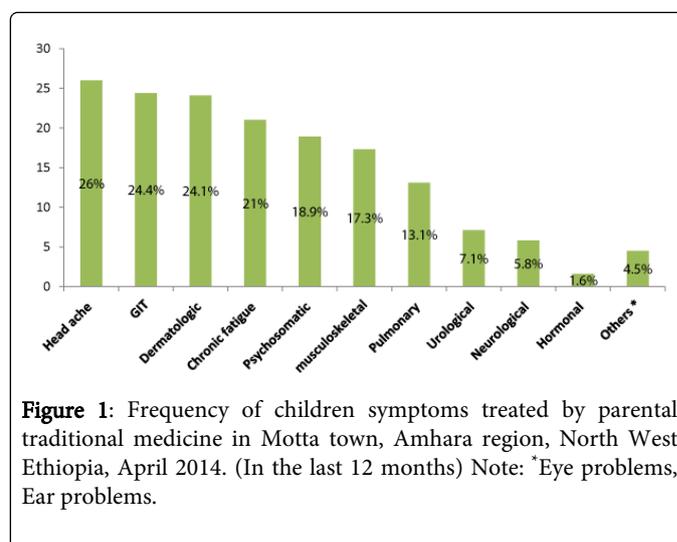
Among the total 381 participants of this study, 336(88.2%) had used at least one form of traditional medicine for their children in the last 12 months. Among this 79.8% were females and 8.4 were males. Herbal medicine were most commonly practiced 255(66.9%) followed by religious/prayer practice 201(52.8%), massage 87(22.8%), bone settler 83(21.8%), tooth extractors 38(10.8%) and 16(4.2%) have mentioned as they used other forms of traditional medicine named: Yehareg ressa, Salehu dress and Yebuda medhanit in their culture

Variable	Frequency(N)	Percentage(%)
Sex		
Male	41	10.8
Female	340	89.2
Age (years)		
≤25	63	16.5
26-35	179	47
36-45	108	28.3
>45	31	8.1
Religious affiliation		
Orthodox	228	59.8
Muslim	145	38.1
Others*	8	2.1
Marital status		
Single	18	4.7
Married	233	61.2
Divorced	86	22.6
Widowed	44	11.5
Educational status		
Unable to read and write	192	50.4
Read and write	103	27
Primary school (1-8)	28	7.3
High school (9-12)	32	8.4
Residence		
Urban	252	66.1
Sub urban	129	33.9
Number of children (<18 years)		
Less than three	271	71.1
Three- four	104	27.3
Greater than four	6	1.6
Monthly income (Ethiopian birr)		
<500	180	47.2
500-850	114	29.9
851-1500	56	14.7

>1500	31	8.1
*Catholic and Protestant		

### Factors associated with traditional medicine practice

Respondents were asked to list what their reasons were to use traditional medicine for their child/children. Among these (47.5%) mentioned accessibility, (34.4%) cheap in price, (31.5%) having low income, (15%) referred by someone else and 4.7% mentioned lack of time for emergency problems and cultural acceptability of traditional medicines. Study participants have used traditional medicine to treat different health problems (Figure 1).



**Figure 1:** Frequency of children symptoms treated by parental traditional medicine in Motta town, Amhara region, North West Ethiopia, April 2014. (In the last 12 months) Note: \*Eye problems, Ear problems.

Study participants were asked about their reasons for applying traditional than modern medicine. From this, nearly half of respondents (47.2%) used because as it was effective when selected correctly, (37.8%) difficulty in accessing health care facility (20.2%) fear of using drugs and side effect, (11.3%) satisfaction with traditional medicine, (6%) dissatisfaction with modern medicine, (3.9%) less efficacy of modern medicine and (4.5%) mentioned non-curable diseases with modern medicine and cultural acceptability (Table 2).

Variables		Frequency (N)	Percentage (%)
Have you ever used TM for yourself in the last 12 months?	Yes	316	82.9
	No	65	17.1
Who had used CAM?	Mother only	169	44.4
	Father only	95	24.9
	Both	117	30.7
How do you indicate the level of TM efficacy?	Very poor	6	1.6
	Poor	87	22.8
	Fair	52	13.6
	Very good	170	44.6

	Excellent	66	17.3
How do you indicate your level of satisfaction after TM use?	Completely dissatisfied	9	2.4
	Somewhat dissatisfied	79	20.7
	Neither satisfied nor dissatisfied	15	3.9
	Somewhat satisfied	154	40.4
	Completely satisfied	124	32.5

Over all how do you rank the quality of your experience with modern healthcare systems?	Very bad	5	1.3
	Bad	15	3.9
	Good	82	21.5
	Very good	111	29.1
	Extremely good	168	44.1

**Table 2:** Health care experience of participants in Motta town, Amhara region, North West Ethiopia, April 2014 (In the last 12 months, N=381).

Variables		Parental TM use for children			
		Yes	No	COR (95%CI)	AOR (95%CI)
Sex	Male	32(8.4)	9(2.4)	1	1
	Female	304(79.8)	36(9.4)	2.38(1.05-5.37)	2.66(1.11- 6.40)*
Educational status	Illiterate	174(45.7)	18(4.7)	3.56(1.32-9.62)	3.10(1.10-8.84)*
	Read and write	92(24.1)	11(2.9)	3.08(1.06-8.97)	3.45(1.12-0.61)*
	Primary(1-8)	25(6.6)	3(0.8)	3.07(0.70-3.46)	4.80(1.02-2.67)*
	High school	26(6.8)	6(1.6)	1.6(0.46-5.52)	0.97(0.26-3.66)
	Above high school	19(5.0)	7(1.8)	1	1
Monthly income	<500 birr	162(42.5)	18(4.7)	3.68(1.47-9.20)	
	500-850 birr	102(26.8)	12(3.4)	3.48(1.31-9.26)	
	851-1500 birr	50(13.1)	6(1.6)	3.41(1.08-0.75)	
	>1500 birr	22(5.8)	9(2.4)	1	
Accessibility of TM	Yes	168(44.1)	13(3.4)	2.46(1.25-4.86)	2.97(1.42-6.18)*
	No	168(44.1)	32(8.4)	1	1
Cheap in price	Yes	122(32.0)	9(2.4)	2.28(1.06-4.89)	2.41(1.10-5.43)*
	No	214(56.2)	36(9.4)	1	1
Parental TM use	Yes	284(74.5)	32(8.4)	2.22(1.10-4.51)	
	No	52(13.6)	13(3.4)	1	
Effectiveness of TM	Yes	167(43.8)	13(3.4)	2.43(1.23-4.80)	2.48(1.21-5.08)*
	No	169(44.4)	32(8.4)	1	1
Difficulty in accessing modern medicine and cost	Yes	135(35.4)	9(2.4)	2.69(1.25-5.76)	
	No	201(55.1)	36(9.4)	1	

1=Reference \*p-value<0.05(significant)

**Table 3:** Bivariate and multivariate logistic regression analysis of factors associated Parental TM use for children in Motta Town, Amhara Region, North West Ethiopia, April 2014 (N=381).

## Discussion

In this cross-sectional study, the prevalence of parental traditional medicine use for children was 88.2%. It was higher when compared to

a research done in Kuala Lumpur, Malaysia, 84.5% [12] and Southern Arizona, 64% [13]. The difference might be from methodological and cultural differences between the studies. The previous studies were conducted at health care setting and this study was community based.

In a health care setting study, people could be said that they have experience with modern health care system, so the prevalence of traditional medicine use for children might be decreased (Table 3).

In this study, the most commonly used TM therapies were herbal medicine (66.9%), religious therapy (52.8%), massage (22.8%) and bone settler (21.8%). This study is in line with a research done in Southern Arizona where spiritual therapies were most commonly used [13]. This might be due to in Ethiopia also most of the people are religious and religious therapies are given priority. However, the study was in contrary in most cases with the study conducted in Eastern-Harargie district of Oromya region, Ethiopia, where uvulectomy, tonsillectomy, cauterization, milk tooth extraction, spiritual healing and herbal medicine were the most commonly used therapies [6]. The difference could be from the study population; in this study, participants were parents having under eighteen years old children and in previous study participants were parents having under five years old children. And uvulectomy, tonsillectomy, cauterization, milk tooth extraction are commonly practiced among under five children not for older children. In addition, because these are invasive procedures now a days the practices are somewhat decreased.

Some of the socio-demographic characteristics were significantly associated with parental traditional medicine use for children. Adjusting for other factors, sex of the parent was significantly associated with parental traditional medicine practice. Females were 2.66 times more likely to use traditional for their children than males. This was in congruent with studies done in India, Ireland and USA where female gender was an independent predictive factor of CAM use [14-16]. This might be; because female parents spent most of their time with their children than male parents and they are near to their children. But a study done in Addis Ababa, showed there is no significance difference between sexes [2]. The difference might be from the methodology of the study. In a study done at Addis Ababa, the study participants were traditional healers and patients who attend traditional clinic for themselves.

Another factor that affects parental traditional medicine practice was educational level. Parental educational status was significantly associated with parental TM use for children in this study. Illiterate parents were 3.10 times more likely to practice traditional medicine for their children than parents above high school educated. This is not in line with previous studies done in Calabria and Finland where parents who use traditional medicine for their children were more educated [17-20]. This could be because; this study was community based and most of the participants were illiterate.

Resources found within the family and the communities were another pushing factors for traditional medicine practice [21]. In this study, accessibility of traditional medicine was significantly associated with parental use for children. Those parents who perceived traditional medicine as it is being easily accessible were 2.97 times more likely to use traditional medicine for their children when compared to those who perceived as it isn't accessible. This is in line with another study, where accessibility and acceptance of treatments were predictive of parental CAM use for ASD [19].

From the total participants 131(34.4%) perceived traditional medicine as it is cheap. Adjusting for other factors, parents who recognized traditional medicine as it is being cheap enough were 2.4 times more likely to practice for their children than those who didn't perceive as it is cheap. It was lower than a study done in Ghana where 58.6% users of traditional health care services claimed that traditional

medical services are "cheap" [22]. This may be due to the socio-economic and market differences between participants in Ghana and Ethiopia.

Perceived effectiveness of traditional medicine was another factor significantly related with parental traditional medicine utilization. In this study, 167 (43.8%) of participants perceived traditional medicine as effective when selected correctly and had used for their children. Adjusting for other factors, those who perceived traditional medicine as effective were 2.48 times to use for their children than those who perceived as it is not accessible. This was in agreement with a study done among Calabrian children, where perception of the efficacy of traditional medicine was high in all interviewed [17].

Although parental use of traditional medicine for themselves was significantly associated with childhood traditional medicine practice in previous studies [13,16,19,22]. In this study, there wasn't significant difference between parents who had used for themselves and those who hadn't used it previously. Probably this could be because child and maternal health service have received government attention currently and health education has been given at large to the parents regarding children's health.

## Conclusion

There was high parental traditional medicine practice for children in this study (88.2%). This indicates the contribution of traditional medicines to the public health is significant. The study showed that for the majority of parents traditional medicines were among the options to promote, prevent and treat their children's health/health problems. The most commonly used traditional medicine therapies were herbal medicines, religious practice, massage, bone settlers, and tooth extraction in order. Female parents, low educational status of parents, easily accessibility of traditional medicines, being cheap in price and perceived effectiveness of traditional medicines were predictors for parents to use traditional medicine for their children.

## Recommendation

1. Since perceived efficacy is predictor for traditional medicine use, safety and efficacy of traditional medicine should be studied further.
2. Controlling mechanism should be set regarding traditional healers and traditional medicine accessibility.
3. Education, support and counseling should be given to community at large and particularly to the women regarding traditional medicines.
4. Further national wide research (quantitative and qualitative) including children's characteristics should be conducted.

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## Authors contribution

The authors have contributed their unreserved effort throughout this study in data collection, preparation of the manuscript and approval of the final manuscript.

## Conflict of interest

We declare that we have no competing interests

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