

Supplementary Materials

Annex I

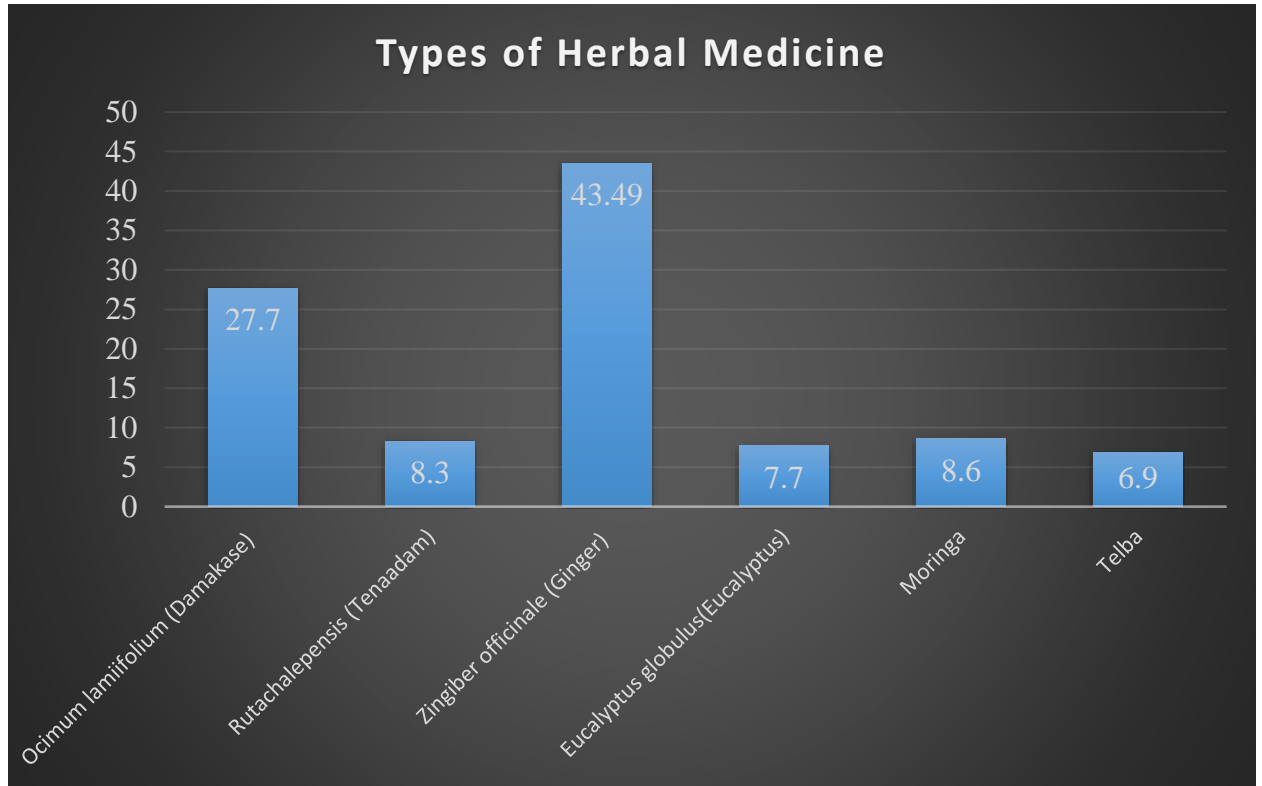


Figure 2 shows the types of herbal medicine utilization of pregnant women in Gazo District, North Wollo, Ethiopia, 2025. (N=456).

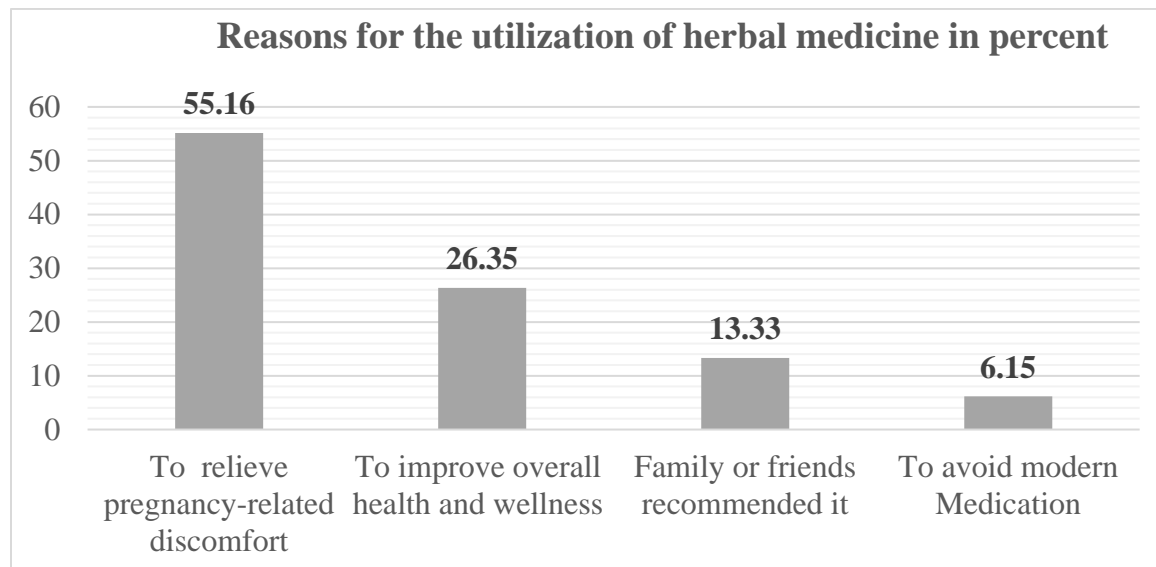


Figure 3: shows the types of herbal medicine utilization of pregnant women in Gazo District, North Wollo, Ethiopia, 2025. (N=456).

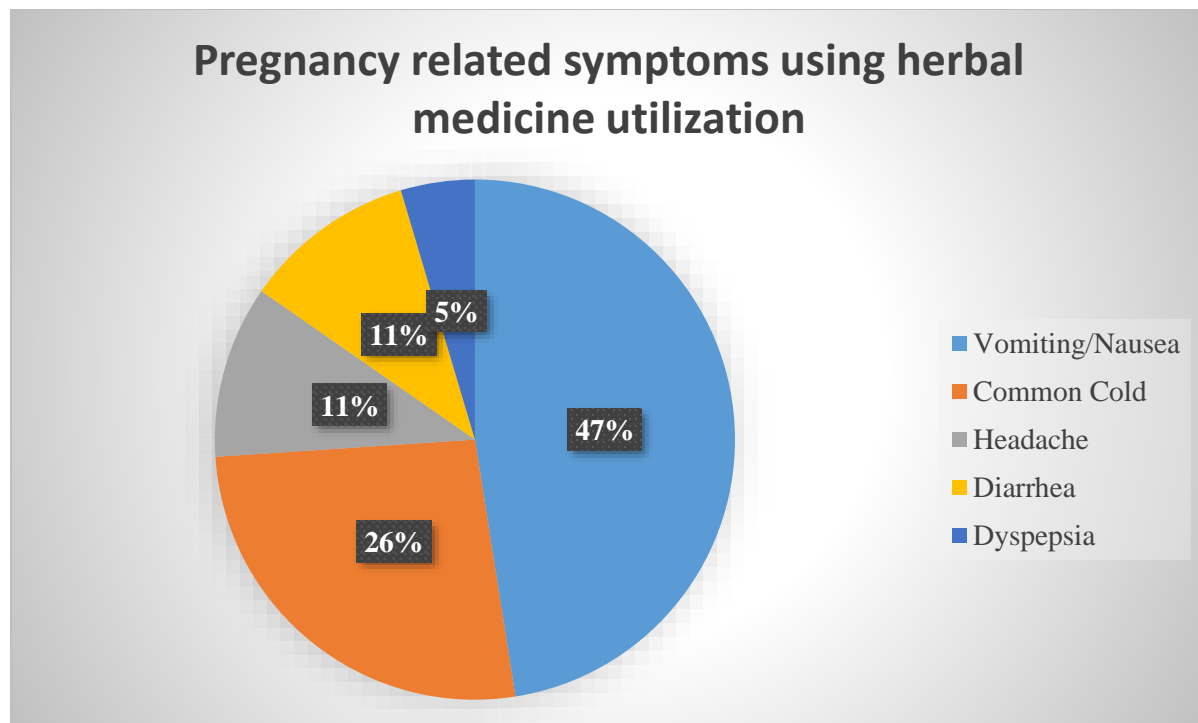


Figure 4: shows the pregnancy-related symptoms using herbal medicine utilization of pregnant women in Gazo District, North Wollo, Ethiopia, 2025.

Table 4: Socio-cultural factors of pregnant Women in Gazo District, North Wollo, Ethiopia, 2025.
(N=456).

Variables	Categories	Frequency	Percent %
Have you been encouraged by cultural practices to use herbal medicine	Yes	309	67.76
	No	147	32.24
Did you pay for the herbal medicines you used	Yes	198	43.42
	No	258	56.58
Who recommended the Herbal medicine for you	Traditional Medicine	126	17.63
	Family Member	226	49.56
	Friend/neighbor	71	15.57
	Self (Personal experience)	33	7.24
Do you think herbal Medicine is more accessible and affordable than Modern medicine?	Yes	229	50.22
	No	227	49.78
Do you think herbal Medicine is more effective and safer than modern medicine	Yes	126	27.63
	No	330	72.37
What factors influenced your decision to use herbal medicine over modern Medicine	Lack of access to healthcare services	207	45.39
	Cost of modern medicine	74	16.23
	Cultural beliefs	150	32.89
	The perception that herbs are safer	25	5.48

Annex II

Consent Form

Consent form in English

My name is ----- I am a member of the research team conducted by Absera Melak MPH student at Debre Berhan University, Asrat Woldeyes Health Science Campus, and Department of general master of public health. I am here to gather information about prevalence herbal medicine utilization and factors affecting it so I want to ask some questions. Would you mind if I took some time in your facility? Clients name will not be included in the information. I promise to keep the confidentiality of client's data. The study will provide is very important to solve problems associated with herbal medicine utilization and associated factors among pregnant women at Gazo District, North Wollo Zone, Ethiopia, 2025.

Are you willing to allow me to conduct the study in your facility?

Yes_____ No_____

I have been briefly informed about the study and I clearly understood the objective. Consequently, I here approve my consent with my signature.

Signature_____

Date_____

If you have any question you can contact the principal investigator by this address.

Cell phone number: 0963780538 or e-mail at address: absi.melak@gmail.com

Information sheet and Verbal consent

Greeting;

How are you, my name is ----- I am a member of the research team conducted by Absera Melak MPH student at Debre Berhan University, Asrat Woldeyes Health Science Campus, Department of general master of public health. I am here to gather information about prevalence of Herbal medicine utilization and factors affecting it so I want to ask some questions. Would you mind if I take some time with you? Your name will not be included in the information. I promise to keep the confidentiality of your response. It takes us about 5 minute. The study will help to improve the health of People living with HIV.

Your participation is voluntary and you are not obligate to answer any question which you do not wish to answer. If you fill discomfort with this, please fill free to drop it any time you want.

Are you willing to participate in the study?

Yes_____ No_____

Name and Signature of interviewer

Name of health institution; _____

Name of data collector; _____ Signature _____

Name of supervisor_____

Date; _____

Start time _____

Code No of Participant_____

If you have any question you can contact the principal investigator by this address.

Cell phone number: 0963780538

E-mail at address: absi.melak@gmail.com

Data collection tool (English version)

The questionnaire was prepared to collect data to assess prevalence of herbal medicine utilization and associated factors among pregnant women at Gazo District, North Wollo Zone, Ethiopia, 2025.

Participant Identification Number: _____ Date: _____

Section A: Socio-demographic characteristics related questions.

In this section we are going to ask you questions about yourself. Please feel free to tell us the Truth. As I told you earlier, this information will be treated confidentially and no one outside the study team will have access to it.

Code	Question	Response	Remark
Q 01	Age in years?	-----	
Q 02	What is your marital status?	1.Married 2.Single 3.Widowed 4.Divorsed	
Q03	What is your religion?	1.Orthodox 2.Muslim 3.Protestant 5.Others	
Q04	What is your occupation?	1.House wife 2.Merchant 3.Student 4.Daily laborer 5.Government employ 6.Other specify	
	What is your residence	1.Rural	

Q05		2.Urban	
Q06	What is your educational status	1. Unable to read or write. 2. No formal education 3. Primary education (grade 1-8) 4. Secondary education (grade 9-12) 5. Diploma and above	
Q07	What is your husband educational status	1. Unable to read or write. 2. No formal education 3. Primary education (grade 1-8) 4. Secondary education (grade 9-12) 5. Diploma and above	If not married skip to Q 09
Q08	What is your husband occupation	1.Farmer 2.Merchant 3.Government employee 4.Daily laborer 5.Other specify-----	
Q09	Family Size	-----Birr	
Q10	Do you have any chronic diseases or medical conditions?	1.Yes(Please Specify----- 2. No	
Q11	If yes, Have you used herbal medicine during your pregnancy to manage chronic diseases?	1.Yes(Please Specify----- 2. No	
Section B: Obstetrics and Gynecology Factors Questions I am now going to ask you some questions about Obstetrics and Gynecology Factors. This information will be treated Confidentially and no one outside the study team will have access to it. Please answer truthfully.			
Q1	What is your parity in number?	-----	

Q2	How many pregnancies have you had including the current pregnancy?	-----	
Q3	How far along are you in your current pregnancy?	-----weeks	
Q4	How many times you follow ANC?	-----	
Q5	When do you start ANC follow up?	-----weeks	
Q6	Have you ever used herbal medicine during your previous pregnancy	1.Yes 2.No 3 This is my first pregnancy	
Q7	If yes when did you took it?	-----weeks	
Q8	For what purpose did you take it? (more than one answer is possible)	1.To relieve pregnancy-related discomfort (e.g., nausea, back pain, fatigue) 2.To improve overall health and wellness 3.To avoid modern medications 4. Family or friends recommended it 5. Other (please specify): _____	

Section C: Health Service related Questions

I am now going to ask you some questions about Health Service related. This information will be treated Confidentially and no one outside the study team will have access to it. Please answer truthfully.

Q1	Distance from health facility	1.>5 Km 2.<5 Km	
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Q2	Do you get health education/health information during your ANC visit?	1. Yes 2. No	
Q3	If yes, what type of health information? (more than one answer is possible)	1. Nutrition 2. Personal Hygiene 3. Herbal medicine risks 4. Importance of ANC visit and Birth preparedness 5. Others (specify)-----	

Section D: Socio-Cultural related Questions

I am now going to ask you some questions about Socio-Cultural related. This information will be treated Confidentially and no one outside the study team will have access to it. Please answer truthfully.

Q1	Who recommended the herbal medicine to you?	1. Traditional healer 2. Family member 3. Friend/neighbor 4. Health professional 5. Self (personal experience)	
Q 2	Did you pay for the herbal medicines you used?	1.Yes 2. No	
Q 3	Do you think herbal medicine is more accessible and affordable than Modern medicine	1. Yes 2. No	
Q4	Do you think herbal medicine is effective and safe than modern medicine	1.Yes 2. No	
Q5	What factors influenced your decision to use herbal medicine over modern healthcare?	1. Lack of access to healthcare services 2. Cost of modern medicine 3. Cultural beliefs 4. Perception that herbs are safer 5. Other (Specify): _____	

Q6	Have you been encouraged by cultural or religious practices to use herbal medicine during pregnancy?	1.Yes 2.No	
Q7	Is herbal medicine commonly used by pregnant women in your community?	1.Yes 2.No	
Section E:Herbal Medicine Utilization Questions I am now going to ask you some questions about Herbal Medicine Utilization. This information will be treated Confidentially and no one outside the study team will have access to it. Please answer truthfully			
Q1	Have you used herbal medicine during your current pregnancy?	1.Yes 2. No	If No skip to Q 38
Q2	If yes, Which of the following herbal medicines have you used during pregnancy? (Select all that apply)	1. Ocimum lamiifolium (Damakase) 2. Rutachalepensis (Tenaadam) 3. Zingiber officinale (Ginger) 4. Eucalyptus globulus(Eucalyptus) 5. Other (please specify):_____	
Q3	What are the primary reasons you use herbal medicine during pregnancy? (Select all that apply)	1.To relieve pregnancy-related discomfort (e.g., nausea, back pain, fatigue) 2.To improve overall health and wellness 3. To avoid modern medications 4. Family or friends recommended it 5. Other (please specify):_____	
Q4	For what pregnancy related symptom using herbal medicine? (Select all that are applicable.)	1.Vomiting / Nausea 2. Common cold 3. Headache 4. Diarrhea 5.Dyspepsia 6. Other (Specify)	

Q5	What part of the (herb) do you use?	1.Seed 2.Root 3.Leaf 4.Other (Specify-----	
Q6	By what method you apply herbal medicine? (Check all that apply)	1. Oral 2. Inhalation 3. Topical 4. Other (Specify-----	
Q7	In what form do you use herbal medicine During pregnancy?	1.Tea 2.Cpsules/Tablet 3.Powder 4.Oil 5 .Other(Specify-----)	
Q8	How often do you use herbal medicine?	1.Daily 2.Weekly 3.Occasionally (less than once a week) 4.Only when symptoms arise	
Q9	Have you experienced any obstetric complications	1.Yes (Please specify): _____ 2. No	
	How do you usually obtain herbal medicines?	1. Pharmacy 2. Herbalist or traditional healer 3. Local market 4. Family or friends 5. Other (please specify): _____	

STATA output for multivariable binary logistic regression

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Logistic regression               Number of obs   =      456
                                LR chi2(17)        =     194.19
                                Prob > chi2         =     0.0000
Log likelihood = -212.94895       Pseudo R2      =     0.3132
  
```

Heba1New	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
Residence						
Rural	2.075708	.5642028	2.69	0.007	1.218427	3.536171
Educationstu						
Unable to read and write	3.765591	1.637056	3.05	0.002	1.606131	8.828467
No formal Education	5.081073	2.360996	3.50	0.000	2.04377	12.6322
Primary Education	2.151152	1.418482	1.16	0.245	.5907232	7.833546
Secondary Education	2.010366	1.242907	1.13	0.259	.5984395	6.753516
Chronicdisaeas						
Yes	1.277253	.4349152	0.72	0.472	.6552935	2.489534
Distancefromherb						
>5 Metre	6.062792	1.616207	6.76	0.000	3.595515	10.22314
herbausebeforecurentprg						
Yes	4.000743	1.289138	4.45	0.000	2.197041	7.579496
Encouragedcultural						
Yes	2.184929	.6247053	2.73	0.006	1.247572	3.826565
ParityNew						
<=2 childeren	1.313221	.346526	1.03	0.302	.7829378	2.202665
ANCVisitNew						
<3 Times Vsit	3.45611	.9849654	4.35	0.000	1.976976	6.041901
GravidityNew						
<2 Primigravida	.911216	.2716622	-0.31	0.755	.5079855	1.634524
GestationalAgeNew						
First Trimister	.8956087	.3558296	-0.28	0.781	.4110852	1.951213
Secound Trimister	1.219425	.5185362	0.47	0.641	.5299054	2.806154
StartANCvisit						
StartANC with in 12weeks	1.283362	.459046	0.70	0.485	.636624	2.587115
FamilySizeNew1						
5-6	1.410907	.4245847	1.14	0.253	.7822507	2.544783
>7	1.337443	.4704623	0.83	0.408	.6712041	2.664993
_cons	.0209888	.0129974	-6.24	0.000	.0062356	.0706474

. vif

Variable	VIF	1/VIF
Residence	1.22	0.820826
StartANCvisi~t	1.22	0.821679
Encouraged~l	1.21	0.827839
GravidityNew	1.20	0.835604
Distancefr~b	1.18	0.844220
ANCVisitNew	1.16	0.859947
FamilySize~1	1.16	0.864572
Chronicdis~s	1.13	0.887679
ParityNew	1.10	0.911534
Educationstu	1.09	0.914024
herbausebe~g	1.09	0.919018
Gestationa~w	1.08	0.926804
Mean VIF	1.15	