COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF NURSING

SELF-MEDICATION PRACTICE AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN IN RURAL KEBELES OF CHEHAWEREDA GURAGE ZONE CENTERAL ETHIOPIA

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A RESEARCH THESIS TO BE SUBMITTED TO WOLKITE UNIVERSITY COLLEGE OF MEDICINE AND HEALTH SCIENCES, DEPARTMENT OF NURSING FOR THE REQUIRMENTS FOR MASTER OF SCIENCE DEGREE IN MATERNITY AND REPRODUCTIVE HEALTH NURSING

NOVEMBER, 2024
WOLKITE, ETHIOPIA

Self-medication practice and associated factors among pregnant women in rural kebeles of Cheha Woreda Gurage zone Centeral Ethiopia

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ABSTRACT

Introduction: *Self-medication practice is the use of drugs without a medical advice to treat self-identified illnesses. This could lead to a multiple health problems for the mother and the fetus during pregnancy. However, the prevalence is reported to be high both in developed and developing countries. A large proportion of pregnant women in Ethiopia live in rural areas with low healthcare coverage and a lack of basic drug safety information. Despite this, studies are limited in rural Ethiopia and at the community level, and as a result, limited scientific evidence on SMP during pregnancy in the Gurage zone.*

Objective: *To assess the prevalence of self-medication practice and identify its associated factors among pregnant women in rural Keble of Cheha Woreda*

Method: *A community-based cross-sectional study design supplemented with qualitative data was employed on 607 pregnant women and 40 key informants in the rural kebele of Cheha woreda from March 1 to April 30/2024 GC. A multi-stage sampling technique was used to select study participants; the quantitative data was collected using a structured interview questionnaire and analyzed with Binary logistic regression and thematic analysis for qualitative data.*

Results: *Out of the sample pregnant women, 555 pregnant women and 38 key informants participated in the study with a response rate of 91.5%. The overall prevalence of SMP among pregnant women was 286(51.5%).Age of the pregnant women(AOR = 0.34, 95% CI (0.04-3.013)), ANC follow up (AOR=2.94, 95%CI (1.08-8.0)), Pregnancy related problem* (*AOR =0.056, 95% CI (0.03-0.09)), Knowledge(AOR = 2.02, 95% CI (1.06-3.84)), Distance from health facility (AOR =3.52 95% CI (1.13-10.9)) and Drug availability in the nearest health facility (AOR=2.6,95% CI: (1.44-4.7)) were significantly associated with self-medication practice. Minor illness, low cost alternative and time saving were the reasons to SMP.*

Conclusion and Recommendation: *Almost half of the pregnant women practiced self-medication in the study setting. An awareness-building campaign and health education for pregnant mothers and general population, focusing on rural areas, need to be advocated.*

Keywords*; Pregnant Women, Self-Medication Practice, OTC medication, Rural kebele, Cheha Woreda Gurage Zone, Central Ethiopia*

APPROVAL SHEET

This thesis by **Shikuria Abdela** examines self-medication practices and associated factors among pregnant women in rural kebele of Cheha wereda Gurage Zone, Central Ethiopia, 2024

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ACKNOWLEDGMENTS

I would especially like to thank Wolkite University for the opportunity. I am deeply grateful to my advisers, Mr. Fantaye Chemir and Mr. Zebene Mekonnen, for their insightful remarks, support, and helpful guidance throughout the entire thesis preparation process, from topic selection to writing final thesis report. Additionally, I would want to express my gratitude to the Wolkite University Department of Nursing and College of Medicine and Health Science for providing me with the material I needed to prepare this research work. And to the Cheha woreda health office for giving me the details I needed to know about the woreda, which served as the background for my study and their respective health Extension workers for their best cooperation during data collection. I would also like to express my gratitude to all of the writers who kindly provided their published works at no cost for my literature evaluation. I would like to thank my teachers and my family for their continuous encouragement.

LIST OF ACRONYMS AND ABBREVIATIONS

ANC	Ante Natal Care
AOR	Adjusted Odd Ratio
BHU	Basic Health Unit
CI	Confidence Interval
CSA	Central Statistical Agency
DROs	Drug Retail Outlets
EC	Ethiopian Calendar
FGD	Focus Group Discussion
GC	Gregorian Calander
HCP	Health Care Provider
HHs	House Holds
H/C	Health Center
OTC	Over The Counter
SDG	Sustainable Development Goal
SMP	Self- Medication Practice
SPSS	Statistical Package for Social Science
WHO	World Health Organization
WKU	Wolkite University

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1. INTRODUCTION

1.1 Background

Maternal and neonatal heath is a current public health issue of the countries all over the world and should be addressed using consistent, coordinated and all-embracing policies and programs (1). During pregnancy, the drugs given to or taken by pregnant mothers to alleviate pregnancy related symptoms or for various purposes may cause serious adverse effects on mother and the fetus(2) . According to World Health Organization, self-medication defined as the act of treating self- diagnosed disorders or pregnancy- related symptoms using manufactured or homemade drugs without medical prescriptions by individuals or intermittent or continued use of medicines prescribed by physicians for chronic or recurring diseases(3). Rational use of medicines is a strategy allowing prescribing of the right drug, for the right patient, with right dose, on proper time duration and at the fair lowest cost to the patient, however more than half of all medicines are prescribed, issued or sold improperly (4). Self- medication is one of the most common types of irrational drug use. Antibiotics, analgesics and traditional/ herbal medicines are the most commonly used for self-medication by pregnant women in Ethiopia (5). Self-medication practice during pregnancy fan the drug effect on fetal structural or functional development it may not be immediately evident, and the harm that ensues may have lifelong adverse effect. Due to this negative consequence medication safety in pregnancy is utmost importance (6).

Because of pregnant women are often excluded from clinical trials of medicines, many commonly used medicines have limited evidences of safe use in pregnant women, due to this limited medicine information self-medication contribute to maternal and neonatal mortality morbidity, and fetal death (7). Studies show that there is a high level of self-medication use among pregnant women (8). Globally, the overall prevalence of SMP during pregnancy is reported to be 44.55% (9). In reducing maternal and neonatal deaths, understanding and managing self-medication practices and, in doing so, promoting medication safety among pregnant women will go a long way in achieving the sustainable development goals (SDGs) of Ethiopia.

1.2 Statement of the problem

Globally, self-medication is a common phenomenon and has been reported to be on the increase. Study show that approximately 80% of the population in the world use unconventional medicines as the first source of health care (10). The prevalence of self-medication among pregnant women is reported to be high, both in developed and developing countries, reviews and meta-analysis of the prevalence and associated factors of self-medication among pregnant women worldwide show that the global prevalence of self-medication among pregnant women is 44.55% (9).Self-medication practice is extremely high during pregnancy in developed countries like Parana, Brazil 94.67%, studies done in Finland 84.8, Sweden 79.3, and Australia 77.4% (11). The pooled prevalence of SMP among pregnant women in Africa is documented at 55% (12). In Sub-Saharan Africa, the prevalence of herbal drugs is also reported to be 2% (Tigray, Ethiopia) to 100% (Machakos, Kenya)(13). A systematic review of self-medication practice in Ethiopia concluded that the prevalence of self-medication varied across the studies reviewed, ranging from 12.8% to 77.1% with an average of 36.8%, and fever, headache, gastro-intestinal diseases, and respiratory diseases were the commonest symptoms for which self-medication was taken (14). According to research conducted at the University of Gondar Comprehensive Specialized Hospital, Mizan Tepi University Teaching Hospital, and Kemisie General Hospital, between one-third and two-thirds of Ethiopian pregnant women self-medicate with conventional and herbal medicine. (15-17)

Self-medication can cause a multiple health problems starting from minor drug reactions to severe health problems and life- threating conditions(18). Self- medication can impact health of individuals and communities; especially for pregnant women by causing unexpected health problems and complication like preterm delivery, fetal loss, abortion, and subsequent death to the mother and the fetus (18).In addition to affecting maternal health it cause serious structural and functional adverse effects on the fetus including fetal toxicity, malformations, teratogen effects, and other potential harms like low birth weight, premature birth, feeding and respiratory problems (8) .

Self-medication could be affected by several factors including lack of access to healthcare service, unregulated distribution of medicines, patients' attitudes toward healthcare providers, socio-economic factors, long waiting times, cost of the drugs, educational level, age, income, satisfaction, and belief of people's toward medication and disease(19, 20).

Even though the government currently prioritizes mother and child health, Ethiopia has one of the highest rates of maternal and newborn morbidity and mortality in the world, and the rate of morbidity and mortality related to pregnancy has not decreased to a satisfactory level (10). Pregnancy-related self-medication results in allergy illnesses, birth abnormalities, miscarriages, and subsequent death. Reducing issues related to self-medication is essential for safeguarding the health of the mother and the baby, and controlling the use of self-medication during pregnancy may significantly lower the rate of maternal and infant deaths brought on by drug and herb addiction (21).

In Ethiopia, the majority of research that has been done so far has revealed the prevalence of SMP during pregnancy from institutional-based hospitals and health facilities in large urban cities (16,17, 22). However, the findings may differ from those obtained in rural and primary care settings due to changes in access to health facilities, client awareness and perception, regulatory body engagement, and other socio demographic and clinical evidence. A significant fraction of pregnant women in Ethiopia reside in rural areas with limited access to healthcare, little knowledge of basic drug safety, and little education (2, 18). Some are even unable to receive ANC follow-up. Furthermore, incorrect pharmaceutical practices are being used, with people without any medical experience or education even selling medications in stores (10). Therefore, evaluating the use of self-medication by expectant moms in rural settings and community level is critical for determining an appropriate intervention strategy.

However, no published research that addresses the issue of SMP among pregnant rural women in settings similar to this study location has been located. Identifying the extent and causes of self-medication practice among pregnant women on a community level plays a big role in minimizing the mortality and morbidity related to self-medication practice. Therefore, the goal of this study is to ascertain the extent of pregnant women's self-medication and related factors in the rural kebele of Cheha.

1.3 Significance of the study

The studies done on associated factors of SMP among pregnant women in Ethiopia were conducted mainly in institutions; this might not represent the general population. The prevalence and associated factors of SMP among pregnant women are not explored in this area. Thought, beliefs, and attitude-related factors that may contribute to SMP during pregnancy were not assessed in most of the study. The rationale of this study is to fill this gap in information.

The information from this study can be adopted by health professionals and other stakeholders in the study setting to improve the health of the mother and child.

The result of this study will benefit the various levels of health service managers, like the zonal health department and the woreda health office, in developing strategies and appropriate interventions to prevent the risks associated with self-medication practice during pregnancy. This can reduce the rate of morbidity and mortality among women and children and, hence, may contribute towards the achievement of the Ethiopian SDG's.

It could also serve as a reference for academicians, public health experts, and researchers who want to study self-medication practice and contributing factors in providing baseline information.

2. LITERATURE REVIEW

2.1 Prevalence of self-medication practice among pregnant women

Many studies have evidenced that self-medication as a health-seeking behavior is also present in the United States and in Europe and that it is not a trend in only the developing countries. Even if developed countries are known to have better health facilities with drug safety information in their population and easy access to health facilities and professionals. Even in the most advanced countries like Europe (Western, Northern, and Eastern), North and South America, and Australia, the studies found the pooled result of self-medication practice is high during pregnancy 66.9%, it also reported self-medication practice ranging from 0.1% Europe to 100% USA (23). Studies also have been estimated that greater than 75% of mothers self-medicated during their pregnancy. Cross-sectional study done in developed country in 2014 shows, in Finland 84.8%, in UK 82.1%, in Sweden 79.3% and in Switzerland 72.5% (11).

In developing countries in Africa and Asia, self-medication, including the use of herbal remedies as a primary form of health care, is very common among the population, and the pooled prevalence of self-medication among pregnant women in Africa is documented at 55% (12). Studies conducted in different parts of Nigeria revealed that the high prevalence in cross-sectional descriptive studies adopted in Jos was 85%, 72.4% in Uyo, and 63.8% in Ibadan pregnant women practiced self-medication (24-26). The research explored the phenomenon of self-medication among pregnant women in Ejisu Juaben Municipality, in the Ashanti region of Ghana, and revealed that self-medication was high among respondents, about 68.3% (27). In an institutional-based cross-sectional study that was conducted in pregnant women in Makongoro, Tanzania, the prevalence of self-medication among pregnant women was 46.24% (28).

Reports from sub-Saharan Africa revealed that pregnant women's prevalence of herbal drug use varied from 2% (Tigray, Ethiopia) to 100% (Machakos, Kenya)(13). In Ethiopia, an institutional-based cross-sectional study was conducted on pregnant mothers who attended ANC follow-up in selected health centers in the North Wollo Zone of Ethiopia. 44.6% reported practicing self-medication during their current pregnancy (22). And a similar institutional-based cross-sectional study conducted at the University of Gondar Comprehensive Specialized Hospital 44.8%, in the governmental H/C in Addis Ababa 26.6%, in the governmental H/C of Bahirdar Town 25%, in the Nekemte referral hospital 21.5%, and in the Jimma University Specialized Hospital 20.1%

found that pregnant women practice self-medication during their current and previous pregnancy (17, 29-32). As shown above, many studies conducted on SMP during pregnancy in Ethiopia are institutional-based and can't represent the community.

In a community-based cross-sectional study conducted in Goba town in 2015, the prevalence of SMP was 15.5% (33). In a similar way, a community-based cross-sectional study conducted in Gedeo Zone, South Ethiopia, in 2019 revealed that the prevalence of self-medication practice among pregnant women was 40.4% (34). And an institutional-based study in rural areas of Ethiopia conducted in the Southwest Shewa Zone of Oromia Region in 2021 shows that 19.8% of pregnant women practice self-medication during their current pregnancy (22). This was a quantitative study that was limited to investigating the attitudes of study participants.

2.2 Factors of self- medication practice among pregnant women

2.2.1 Socio-demographic characteristics

Self- medication practice during pregnancy is associated with factors like age, income, education level, marital status, residency, family size and occupation. In a study of the socio-demographic characteristics associated with self-medication in Spain, a high incidence of self-medication was found among pregnant women who were unmarried, those living alone, those of advanced age, and the unemployed. It was also discussed that the magnitude of self-medication increases with family size, particularly among those who ended their education before the age of 16 and women greater than 43 years old (35). The study carried out at three general hospitals in Akwa Ibom State, Nigeria, shows the level of education has no impact on the usage of native herbs and self-medication (25).

An institution-based mixed-approach study in Addis Ababa in 2017 showed that age, employment status, and average monthly family income were significantly associated with self-medication practice (29). In a cross-sectional study in selected rural public health institutions in Ethiopia in 2021, lower educational status of husbands was significantly associated with self-medication practice (22).

A study conducted on pregnant mothers who came for ANC service in Bahirdar town showed that pregnant women who were attending ANC service in the rural health centers were more likely to practice self-medication than those who were in the urban health centers (30). And a

community-based cross-sectional study conducted in Goba town, southeastern Ethiopia, explained that pregnant women who were unable to read and write were more likely to use self-medication compared to secondary school and above graduates (33).

2.2.2 Obstetric factors

An analytical cross-sectional study conducted in Maringa, Paraná, with pregnant women enrolled in Basic Health Units (BHU) for prenatal care shows that women in the second trimester of pregnancy have a greater chance to use self-medication than women who were in the first trimester. In the same study, women who do not have children, did not plan the pregnancy, did not attend pregnancy groups in the reference BHU, and did not receive guidance from any healthcare professionals regarding the risks of drug use during pregnancy have a high risk factor for the use of self-medication (36).

A cross-sectional study in the Netherlands proposed that self-medication use during pregnancy was more likely if they were nulliparous, had their first pregnancy, had health complaints during pregnancy, or had comorbidity (37). Research explored the cause of self-medication among pregnant women in Nigeria, using various forms of drugs to self-medicate increases during the third trimester of pregnancy (25). The study conducted in Ibadan, Nigeria, explains that the high prevalence of self-medication among pregnant women is more serious when the pregnancy is unplanned (22).

A study conducted on pregnant women in selected rural public health institutions in Ethiopia in 2021 explained that primigravida and knowing one's own gestational age were significantly associated with self-medication practice (22). In addition to that, a study conducted in Addis Ababa in 2017 found that gestational period, previous pregnancy, and delivery-related problems were significantly associated with self-medication practice (29). The study conducted in Bahirdar revealed that primigravida and maternal illness in current pregnancy were significantly associated with self-medication practice during pregnancy (30).

2.2.3 Maternal health care service access

Studies showed that both modern and herbal medicines are commonly used for self-medication in developing countries due to easy access to herbal medicine, which poses potential risks to the mother and fetus (37). A community-based cross-sectional study conducted in Gedeo Zone, South Ethiopia, in 2019 revealed that health facility-related problems a patient faces during a health facility visit, like extended waiting times, the unavailability of drugs and services, and the poor approach of health care providers, were strongly associated with self-medication practice (34). An institutional-based study in rural areas of Ethiopia conducted in the Southwest Shewa Zone of Oromia in 2021 also shows that living close to a health facility was found to be significantly associated with SMP. It also concludes that easy access to drugs, exposure to drug advertising, and perceived cost of the drug have associations with self-medication practice (22).

2.2.4 Knowledge about risk of self-medication

The research explored self-medication among pregnant women in rural areas of Ethiopia and revealed that self-medication was highly related to knowing the risk of the drug during pregnancy (22). And a study conducted in Gedeo Zone, south Ethiopia, in 2019 found that lack of knowledge about medications is highly associated with self-medication practice (34).

2.2.5 Attitude toward self-medication

A community-based cross-sectional study conducted in Gedeo Zone, South Ethiopia, in 2019 explained that in multivariate logistic regression analysis, previous medication use, especially during pregnancy, and having a negative attitude toward health institutions and health care providers were found to be significantly associated with self-medication practice during the current pregnancy (34).

In view of all the above studies reviewed, most of the studies on SMP during pregnancy in Ethiopia were done in major towns where women had a greater chance to get health care services, access to basic drug safety information, and were largely educated. But a large proportion of pregnant women in Ethiopia live in rural areas where health-care coverage is low, the implementation and regulations of drugs are weak, and women lack basic drug safety information and are largely uneducated. In addition, there is poor regulation of pharmacy practice, where drugs are even sold in shops by individuals who have no medical training or education (10). So the prevalence and factors from this type of study can't represent pregnant women who live in rural regions. And also, most of them are institutional-based, limited to specific institutions that do not represent the community. In addition, they use only a quantitative approach to collect the data. It is difficult to assess associated factors that are not considered by the investigator, restrict the idea, and investigate the attitude toward self-medication of the participant.

Therefore, this research was investigate the various reasons and factors underlying self-medication among pregnant women in the regular kebele of Cheha woreda, Gurage Zone, using a community-based cross-sectional study design and using both quantitative and qualitative approaches to fill the gap in those studies. And including the status of ANC follow-up in current pregnancy, disease conditions for which pregnant women in Cheha woreda usually self-medicate the knowledge and attitudes of pregnant women regarding the potential negative effect of self-medication, and socioeconomic factors. These are all interesting issues, information on which will help in planning to resolve the problem of self-medication among pregnant women in rural kebele and, in the process, promote maternal and fetal health in Gurage Zone, central Ethiopia.

2.3 Conceptual Frame work

The prevalence of SMP varies across different communities and it could be affected by several factors including Socio-demographic factors, lack of access to healthcare service, obstetric factor, lack of knowledge on risk of self-medication during pregnancy, patients' attitudes toward healthcare providers, satisfaction, and belief of people toward medication and disease (10, 19, 22, 29). (See Figure 1)

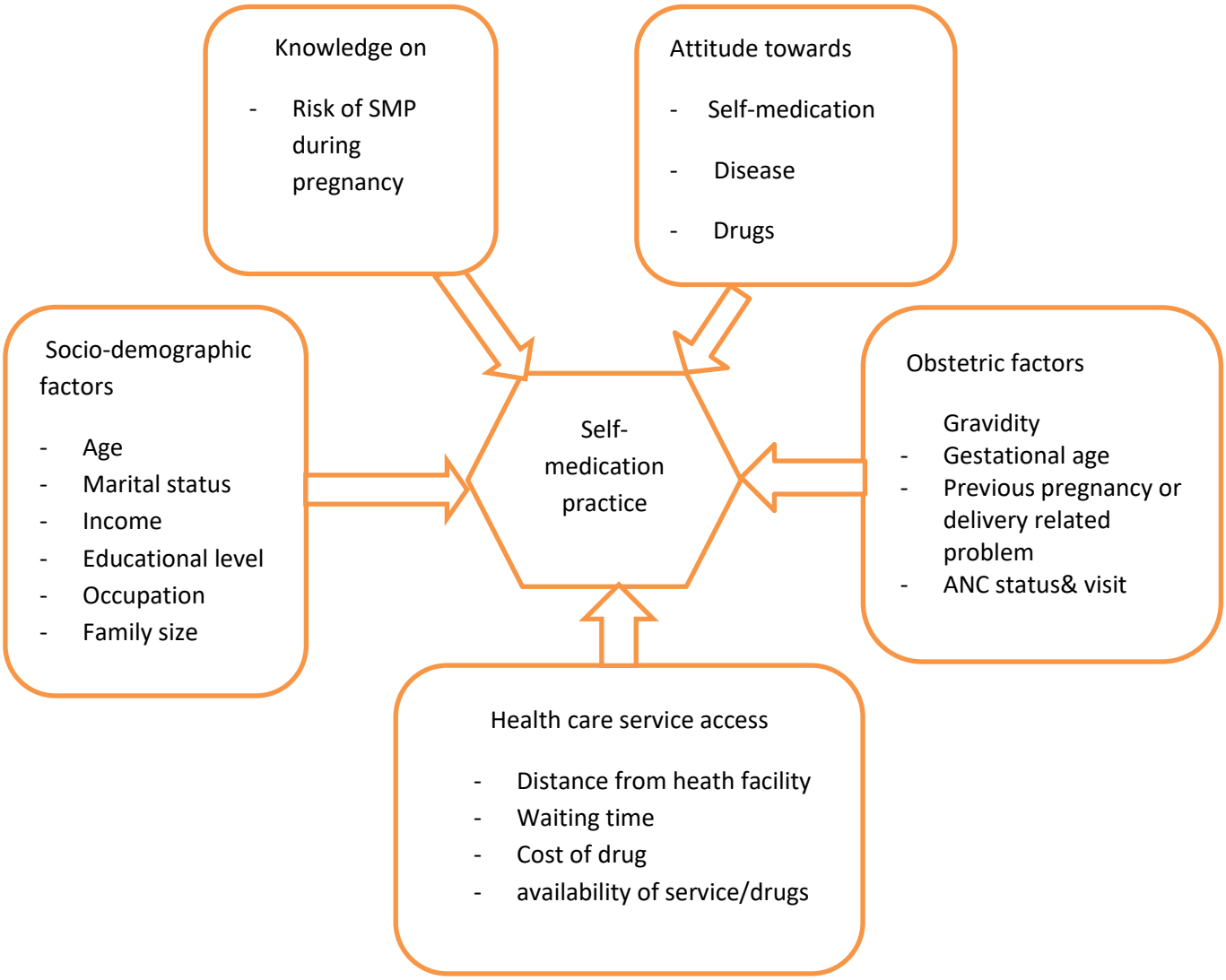

Figure 1: Conceptual frame work that show the relationship between self-medication practice and associated factors among pregnant women developed after reviewing literatures, 2024 (10, 19, 22, 29).

3. OBJECTIVES

3.1 General objective

- To assess prevalence of self-medication practice and its associated factors among pregnant women in rural kebele of Cheha Woreda, Gurage Zone, Central Ethiopia 2024.

3.2 Specific objectives

- To determine the prevalence of self-medication practice among pregnant women in rural kebele of Cheha Woreda, Gurage Zone, Central Ethiopia.

- To identify factors associated with self-medication practice among pregnant women in rural kebele of Cheha Woreda, Gurage Zone Central Ethiopia.

4. METHODS AND MATERIALS

4.1 Study Period and Setting

The study was conducted from March 1/2024 to April 30/2024 GC, in Cheha woreda of the Gurage zone, which is located in central Ethiopia and is about 188 km away from Addis Ababa (the capital city of Ethiopia). Cheha is bordered on the south by Enemor and Ener, on the west by the Oromia region, on the north by the Wabe River, which separates it from Abeshge and Kebena, on the east by Ezha, and on the southeast by Gumer and Geta. The weather conditions in the district are Weynadeg, Dega, and Kola. It has a total of 36 kebeles (four town administrations and thirty-two rural kebeles). Emdiber is the administrative town of the district. According to the Cheha Wadda Health Office annual report, in 2023, the estimated population of the district was 137,574, of which 67,411 are males and 70,167 are females. The total number of households in cheha woreda was 28,076 and there were 6,856 pregnant women during data collection period. In the woreda, there is only one primary hospital, seven health centers, thirty-six health posts, two primary private clinics, and one drug store (Cheha woreda annual report 2016). (See Figure 2 below)

Figure 2: Administrative map of Cheha woreda that shows the study area of study on self-medication practice among pregnant women in rural kebele of Cheha Woreda, 2024.

4.2 Study design

A community-based cross-sectional study designs supplemented with qualitative data was employed.

4.3 Population

4.3.1 Source population

For quantitative: -

All pregnant women in Cheha woreda were the source populations.

For qualitative part:-

All women in Cheha woreda were the source populations.

4.3.2 Study population

For quantitative part:-

Selected pregnant women from selected rural kebeles of Cheha woreda were the study population.

For qualitative part:-

Selected pregnant women and selected women rural drug vendors from selected rural kebeles of Cheha woreda were the study population.

4.4 Selection criteria

4.4.1 Inclusion criteria

For quantitative part: -

All pregnant women who live for last six month in the study area, and registered as pregnant women in family folders of health post

For qualitative part: -

All pregnant women who lived for last six month in the study area, registered as pregnant women in family folders of health post, having previous pregnancy history & member of women

development army, were availed in the monthly regular pregnant women conference and women rural drug vendors who lived for last six month in the study area

4.4.2 Exclusion criteria

For quantitative part: -

Pregnant women who were critically ill and who is health professional were exclude from the study.

For qualitative part: -

Pregnant women availed in the monthly regular pregnant women conference and who is primigravida, were excluding from the study.

4.5 Sample size Determination

For quantitative part:-

The sample size was determined using the single population proportion formula for the prevalence of SMP and the double population proportion formula for the associated factors. For the single population proportion, p= 0.404, a population distribution taken from similar study done in Gedeo, South Ethiopia, on the prevalence and associated factors of self-medication during pregnancy(34) . At d = 0.05 & 95% (CI) were used.

$$n = \frac{(z\alpha/2)2\times p\times(1-p)}{d2} = (1.96)^2 \times \frac{(0.4)(0.6)}{(0.05)2} = 368$$

Where: n= sample size

p= Prevalence of self-medication among pregnant women

d= 5% margin of sampling error tolerated

Zα/2= Critical value for normal distribution at 95% CI = 1.96 (z value at α =0.05)

Then it was yield a final total sample size of 368, and by adding 10% for non-response and multiplying by the design effect of 1.5, the final sample were determined to be 607 pregnant women. The sample size for the second objective was calculated using Epi Info-7 on the parameters stated in (See Table 1 below). Those factors are considered crucial in understanding the associated factors of self-medication during pregnancy.

Table 1: Calculation of sample size for the main factors associated with self-medication practice among pregnant women, 2023/2024

Variables	Reference	% of Outcome among unexposed	AOR	Power (%)	CI (%)	Total Sample
Respondent's age(younger)	(31)	3.5	0.0078	80	95	275
Previous self-medication (yes)	(34)	59.09	4.039	80	95	114
Knowledge about risk of self-medication (Good knowledge)	(29)	33.4	0.64	80	95	200
Educational level (Lower)	(16)	41.6	3.99	80	95	92

After calculating the sample size for the first and the second specific objectives, the maximum sample size was taken and the final sample size was 607.

For qualitative part:-

The sample size for the qualitative study was 40 key informants in 4 FGDs guided by the degree of information achieving saturation of incoming ideas, were conducted separately in homogenic groups based on pregnancy status and rural drug vendor experience, each having ten members discussed in order to gather more explanatory opinions and deepen information complementing the quantitative findings.

4.6 Sampling procedures:

Quantitative data:-

A multi-stage (two-stage) sampling technique was applied to draw a >30% representative sample of all pregnant women in the rural kebele of Cheha woreda. Primarily, a total of ten kebeles from the existing 32 rural kebele of Cheha woreda were selected using a simple random sampling technique. Then the total sample size were distributed to each of the ten selected Kebles based on proportional allocation. The study subjects were selected by simple random sampling techniques from the registry of households (HHs) of pregnant women in family folders of health posts. Then founded the pregnant woman whose HHs were selected by simple random sampling techniques to address home-to-home visits for data collection. (See Figure 3 below)

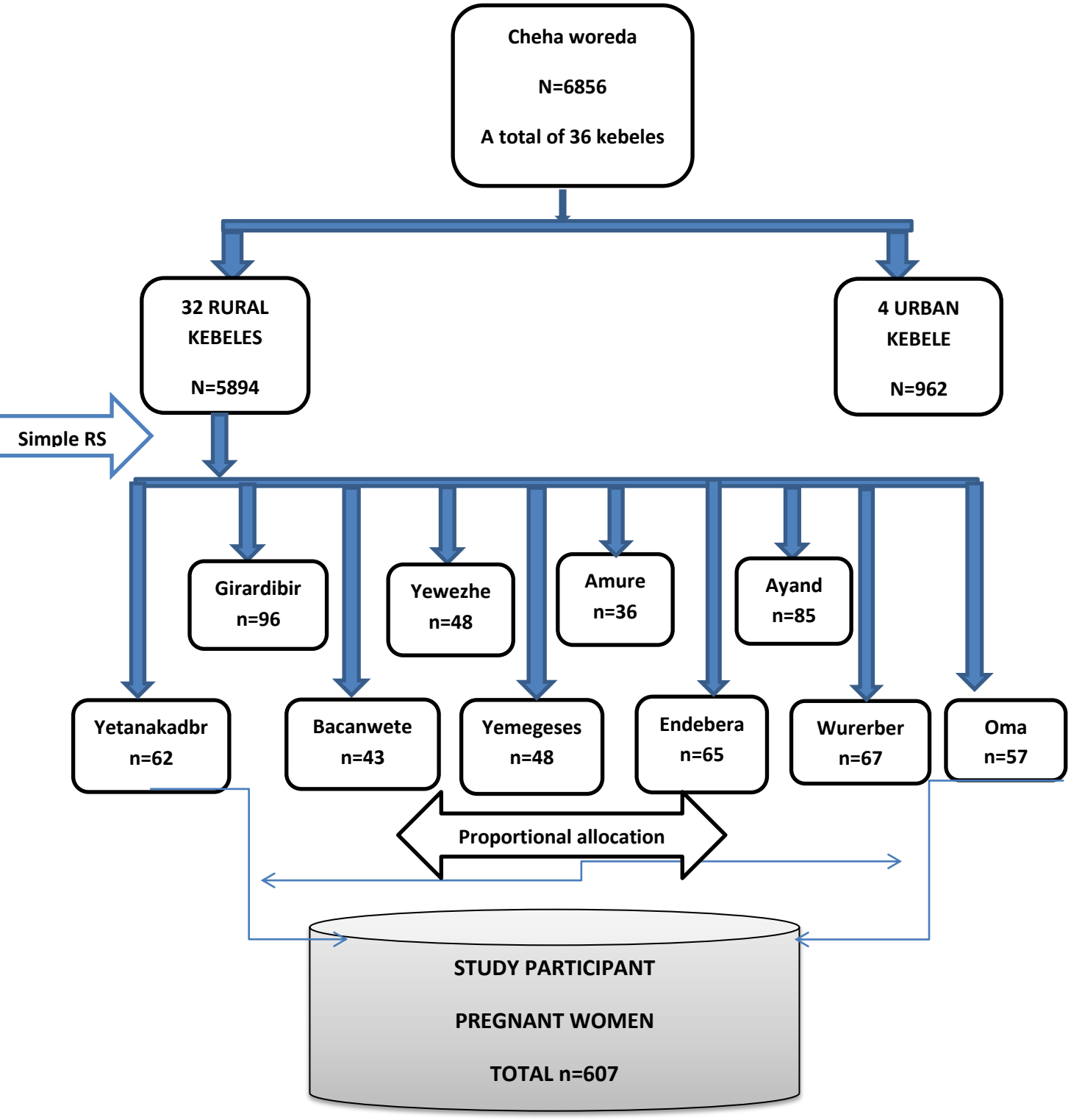

Figure 3: Shows Schematic presentation of sampling technique of study participant for study of self-medication practice among pregnant women in rural kebele of cheha woreda 2024.

For qualitative part

For the qualitative study, a purposive sampling technique was used. Primarily, four Kebeles were selected purposefully based on the schedule of the monthly regular pregnant women conference that fits with the period of data collection. Then the key informants were selected based on the assumption that they were more knowledgeable about the topic of interest and can speak about the general community beliefs and practices using the purposive sampling technique by the principal investigator. This includes pregnant women with previous experience of pregnancy and members of women development army in their kebele and women rural drug venders in the study area

4.7 Data collection tools and procedures:

Quantitative data

The quantitative data was collected using an interviewer-administered, structured questionnaire. The questionnaire was adapted from previous studies (8, 14, 35) and modified to fit this study. The questionnaire was originally prepared in English, and then translated to Amharic language for data collection. It was consist of questions related to socio-demographic factors, obstetric factors, access to health services, and knowledge about the risk of self-medication practices, attitudes toward drugs, health institutions, and health care providers. The data was collected by ten trained and oriented health extension workers who work in those kebeles through home-to-home access. And two degree midwives from the Cheha Woeda Health Office were supervised the daily activities of the data collectors in addition to the principal investigator.

Qualitative data

The qualitative data was collected through four focused group discussions that achieve the saturation of the incoming idea, conducted with 38 key informants selected from Girardibir, Ayaned, Oma and Wurerber kebeles on topics of SMP and its factors. The key informants were 28 pregnant women having previous pregnancy history, member of women development army and assumed roles as community team leaders in their kebele and 10 women rural drug venders discussed separately to ensure homogeneity within the participant groups. The principal investigator was facilitated and modulated the discussion.

The participants were discussed on the time and location of the monthly regular pregnant women conference within March 1/2024 to April 30/2024 on their nearby kebele. All discussions were tape recorded, field notes were taken properly by supervisors, transcribed to texts immediately, and a second person was reviewing the transcriptions for completeness and accuracy.

4.8 Study variable

4.8.1 Dependent variable

- ✓ Self-medication practice

4.8.2 Independent variable

- ✓ Socio-demographic factors

  Age, Marital status, Monthly income, educational level, educational level of the husband, family size, occupation of the participants and their husbands

- ✓ Obstetric factor

  Gravidity, number of children, Gestational age, ANC visit

- ✓ Health care service access

  Distant from health institution, cost of medication, waiting time, availability of service/drugs and health care provider approach

- ✓ Knowledge on risk of SMP during pregnancy
- ✓ Attitude towards self-medication

4.9 Operational and Term definitions:

Medication: any herbs or modern drugs used for treatment of disease and symptoms in humans.

Self-medication: using manufactured /homemade drugs without medical prescriptions (17)

Self-medication Practice: study participants answer yes, at least one out of the three self-medication practice assessment questions.

Knowledge on risk of SMP during pregnancy: The presence of awareness/cognition toward the impact of self- medication on pregnancy.

Adequate knowledge: Participants who score ≥ 50% of knowledge assessment questions regarding risk of self-medication (34)

Inadequate knowledge: Participants who score < 50% of knowledge assessment questions regarding risk of self-medication (34)

Short distance: The distance of health facility less than one hour on foot from the individual's home

Moderate distance: The distance of health facility take 30 minutes to one hour on foot from the individual's home

Long distance: The distance of health facility greater than one hour on foot from the individual's home (34).

Attitude towards drugs and disease: The thinking/feeling of the participant about the medication and the disease need to treat by medication.

Favorable attitude: If study participants will properly answer ≥50% of attitude assessment questions regarding self-medication (34).

Unfavorable attitude: If study participants will answer less <50% of attitude assessment questions regarding self-medication (34).

Herbs: part of plant materials such as leaves, fruits, flowers, seeds, wood, stems, bark, rhizomes, roots, or other parts or soil materials (16).

Herbal medicine: Any herb or combination of herbs used for diagnosis, curative, treatment, or prophylaxis of disease and symptoms in humans (16).

Current pregnancy: Indicates mothers who will be pregnant during data collection period (16).

Key Informant: an individual who has special knowledge on a topic and can speak about the general community beliefs and practices.

4.10 Data Quality Management:

Quantitative Data

Before data collection, training was given to data collectors to enable them to have a common understanding of the objectives of the study, the data collection methods, and each of the questions in the questionnaire. Therefore, the personal variations in interpretation of the questions were minimized. The questionnaire was originally prepared in English, translated to Amharic, and then back translated to English to validate consistency of meaning. Before the commencement of the actual data collection, the questionnaire was pretested on 5 %(29), of the sample size of pregnant women in Darcha, a rural kebele of Eizha woreda, to prevent data contamination. During data collection, the filled-out questionnaire was checked for cleanliness, completeness, and clarity. To ensure the quality of the findings, the data collection was supervised by the principal investigator, and the questionnaires were checked for incompleteness. Incomplete questionnaires were rejected and not considered for analysis. The data was edited, coded, and cleaned on the field and in the office.

Qualitative Data

For the qualitative study, the audio records and notes of the interviews were transcribed using a verbatim transcription technique. The transcribed script was intensively read and translated to English, and then categorized into themes.

4.11 Data Analysis procedures:

Quantitative Data

Descriptive analysis was computed for all variables, and the data was presented using frequency tables, bar graphs, and pie charts according to the type used to summarize the data. The association between self-medication practice and other independent variables were also being investigated using binary logistic regression analysis. Then, to control the confounding effect of other variables and determine independent predictors of self-medication practice in pregnant women, a multivariable logistic regression analysis were carried out. Variables with a p value of < 0.25 in the bivariate analysis were eligible for entry into the multivariate model. The strength of the statistical association was measured by adjusted odds ratios and 95% confidence intervals. Statistical significance was declared at $P<0.05$. During the analysis, the fitness and statistical assumptions of the logistic model were checked to be satisfied. Hosmer-Lemeshow test was used to assess the fitness of the model $p=0.897$.

Qualitative Data

The tape recorded data was transcribed in Amharic language and translated to English. Open code software 4.03 was used to code and categorize qualitative data, and then content analysis was employed to analyze the qualitative data. The exported raw data in open code was read thoroughly text by text and codes were labeled. After that codes were categorized into five different categories. Then every category has been explained below to conceptualize the interpretations of the whole data using the raw data. Finally a theme which fits all the categories was formulated.

4.12 Ethical consideration:

Ethical clearance was obtained from the internal review board of college of medicine and health sciences (IRBCMH), Wolkite University. Permissions to undertake the study were obtained from Gurage Zone health department and from Cheha Woreda health office to the Keble‘s administrative bodies. The study participants were informed about the purpose of study, anticipated benefit, how they are chosen to participate, data collection procedures and therefore

full right to refuse or participate in the study and data collection procedures. And finally verbal informed consent was obtained from individual participants before interview.

4.13 Dissemination of results:

The final report of the study will be presented and submitted to college of medicine and health sciences, department of nursing, Wolkite University. Hard and soft copies will be submitted to college, and then it will be disseminated to Gurage Zone Health department and other local governmental and non-governmental organizations working in the study area through presentations on conferences as well to the community; with that, it will help them to improve the problem. Also it will be presented on seminars, workshops and conferences. Further effort will be made to publish on reputable journal.

5. RESULTS

5.1 Socio demographic characteristics of study participants

Out of the total 607 sample size, 555 pregnant women consented to participate, with a response rate of 91.4%. The mean age of the pregnant women was 30.27years (SD= +/- 5.741), range between 18 and 42 and the majority of the women 154(27.7%) were in age category (25-29) followed by 145(26.1%) in age category (30-34). Almost all 542(97.7%) of the respondents were married and 528 (95.1%) were Gurage in ethnicity, 210 (37.8%) were followers of Muslim. One hundred seventy seven (31.9%) of the respondent had completed primary education, and around half of participants were House wife 255(45.9%). More than half of the participant husbands 300 (54.4%) were farmers and 174 (31.6%) of them had completed primary education. The median monthly household income of participants was 4000.00 ETB (SD= +/-3384.423). Two hundred thirty nine (43.1%) had a monthly average family income of 3000–5999 ETB. (See Table 2 below)

Out of 40 key informants, 38 participated in focus group discussions; among them, 28 were pregnant women with previous pregnancy histories, members of the women's development army, who assumed roles as community team leaders in their kebele, and 10 of them were rural drug venders. Their age ranges from 28 to 66 years, and they are from Girardibir, Ayaned, Oma and Wurerber Kebeles.

Table 2 Socio demographic characteristics of study participants in rural Kebele of Cheha Woreda, Gurage Zone, Central Ethiopia, 2024(n=555)

Variables	Categories	Frequency (n)	Percent (%)
Age of women(in years)	15-19	16	2.9
	20-24	81	14.6
	25-29	154	27.7
	30-34	145	26.1
	35-39	130	23.4
	40-44	29	5.2
Marital status	Single	13	2.3
	Married	542	97.7
Religion	Orthodox	178	32.1
	Catholic	65	11.7

	Protestant	102	18.4
	Muslim	210	37.8
Educational level	No formal education	140	25.2
	Read and write	149	26.8
	Primary education	177	31.9
	Secondary education	79	14.2
	College and above	10	1.8
Occupation	House wife	255	45.9
	Farmer	92	16.6
	Merchant	136	24.5
	Other*	72	13
Average family monthly income in ETB	Low(< 3000)	196	35.3
	Medium 3000–5999)	239	43.1
	High(>6000)	120	21.6

Other*; Government employment, Student and Daily laborer

5.2 Obstetric related characteristics

Concerning the obstetric history of pregnant women, 500 (90.1%) of the participants had ANC follow-up during their current pregnancy. More than three-quarters 423(76.2%) of the women had two or more pregnancies, and the rest 132(23.8%) of them became pregnant for the first time. Two hundred eighty-eight (52%) of the participants were in their first trimester. And around half 272(49.0%) of the participants faced pregnancy-related problems in their current and previous pregnancy.

5.3 Health care service related factors

Table 3 Health service related factors of study participants in rural kebele of cheha woreda, Gurge Zone, Central Ethiopia, 2024(n=555)

Variables	categories	Frequency(n)	Percent (%)
Distance from health facility	Short distance	146	26.3
	Moderate distance	365	65.8
	Long distance	44	7.9
Drugs availability in the facility	Yes	340	61.3
	No	215	38.7
Service availability in the facility	Yes	438	78.9
	No	117	21.1

From the participant 365(65.8%) of them travel from 30 to one hour to get health care service. In addition, more than one-third 215(38.7%) of participants responded there is a lack of drugs, and 117 (21.1%) of them responded there is a lack of services in the nearest health facility. (See table 3 above)

5.4 Knowledge about risk and Attitude towards self-medication

From the total 555 study participants, more than half 289(52.1%) of them had adequate knowledge about the risk of self-medication during pregnancy, but around two-thirds 369(66.5%) of the pregnant women had an unfavorable attitude, and only one-third 186 (33.5%) of them had a favorable attitude. Most of the focused group discussion respondents had heard about self-medication practice, but the majority of them had no detailed knowledge regarding risk of self-medication.

Most of the participants in FGD believed that self-medication practice is not useful to pregnant mothers and their fetuses; however, some of the participants explained that it is more useful to use self-medication for minor health problems than to expose to health facilities and health professional. A 28-year-old pregnant woman states that “there is no benefit from self-medication practice; rather, it is harm; it is not only for pregnant mothers and their fetus; it is true for all" [SmP105].

The participants also concluded that self-medication practice has a risk to the health of the pregnant mother and their corresponding fetus. They mentioned that major risks of self-medication during pregnancy are abortion, preterm labor, intrauterine fetal death, congenital abnormalities, and general health problems. This idea was supported by a 32-year-old participant: "All most of us know that taking medicines without medical advice can affect our pregnancy, fetus, and general health, but we chose using self-medication simply." [SmP107]. One of the participants also mentioned that "I think self-medication practice during pregnancy can cause abortion in early pregnancy and later can affect fetal growth and cause intrauterine fetal death; we should prevent it seriously starting from now"[SmP108].

5.5 Self-medication practice during pregnancy

Figure 4: shows Self-medication practice of study participants in rural kebeles of cheha woreda, Gurge Zone, Central Ethiopia, 2024

Among the study participants, around half 286(51.5%) of them reported using self-medications either with modern drugs, herbal medicine, or intermittent/continuous use of drugs in the current or previous pregnancy.(See figure 5 above)

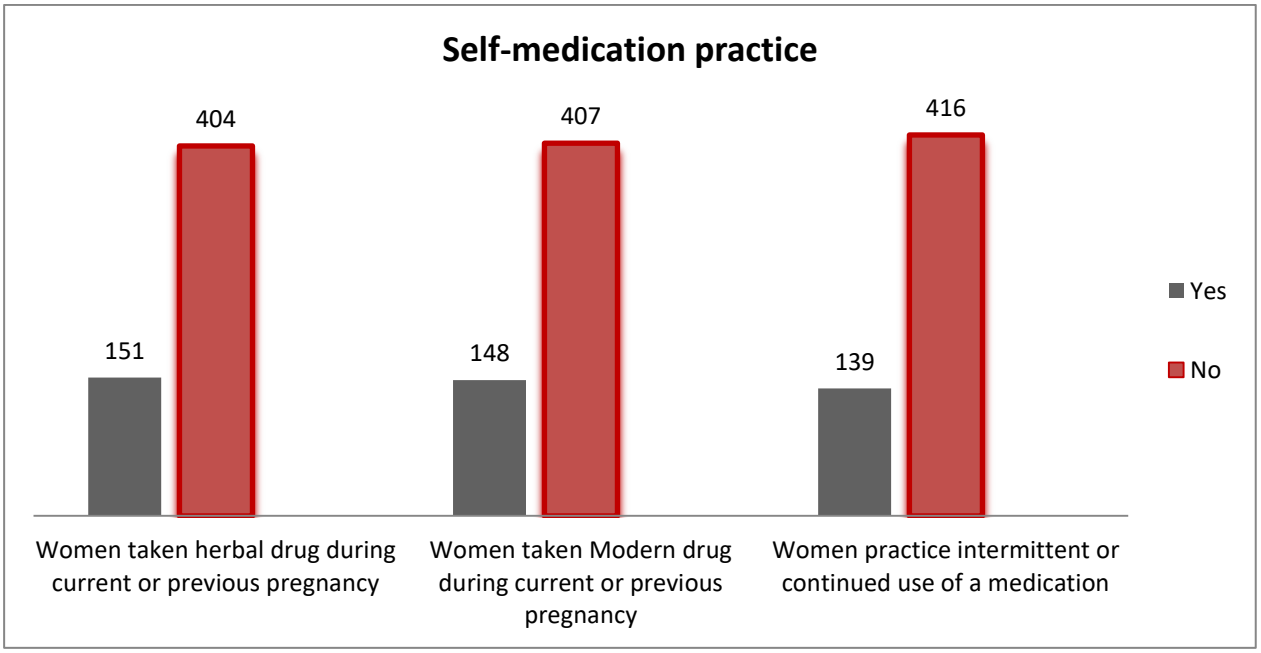

Figure 5: Shows types of Self-medication practice of study participants in rural kebeles of cheha woreda, Gurge Zone, Central Ethiopia, 2024

From these who used medicines by themselves choice, 148 (26.7%) of them reported use of at least one modern medication, and 151 (27.2%) of them took at least one herbal medicine, while 52 (9.3%) participants took both modern and herbal medicines. On the other hand, from the total of 555 pregnant women, 139(25%) of them use the prescribed drug intermittently or continuously by their own choice. (See Fig 6 above)

The majority of participants in FGD explain that most of pregnant women in the study area were practice self-medication during pregnancy. They also believed that the trends of using traditional medicines by the pregnant women did not count as self-medication practice because traditional medicines are parts of their day-to-day diet. In addition, they mentioned that they don't believe intermittent or continuous use of drugs during pregnancy prescribed by a health professional can be self-medication.

The above idea was supported by one of the participants: "Even if the pregnant women know that self-medication is risky for them, they believe that it is only buying and taking modern drugs from drugstores without health professional permission; as a result, the pregnant women use traditional medicine" [SmP101]. A 56-year-old rural drug vendor also reinforced that most of pregnant women in our community use traditional medicine because "recommendations to use traditional medicine during pregnancy from elders, we use it as a conservative trend, not as self-medication" [SmP102].

Other participants also explain that "Most pregnant women use intermittent or continuous use of medication to prevent risk of drug side effects or to get early relief but not to medicate them [SmP103]. In another way, one of the respondents argues that "We use traditional medicine daily during pregnancy or not, that is habitual in our community; because these herbs and medicines are parts of our day-to-day diet, so how can using this medicine to treat our illness be self-medication? " [SmP104].

5.5.1 Source of information, common drugs and reasons to SMP

Table 4 Source of information, common drugs and reasons to SMP of study participants in rural kebeles of cheha woreda, Gurge Zone, Central Ethiopia, 2024

Variables	Categories	Frequency(n)	Percent (%)
Source of information for modern drug	Family	13	8.78
	Previous Experience	63	42.56
	Niebuhr/Relatives	54	36.48
	Personal of drug retail	6	4.05
	Other health professional	14	9.45
Category of modern drug for self-medication	Analgesics/antipyretics	78	52.7
	Anti-helminthic	36	24.32
	Anti-biotic	19	12.83
	Antiemetic	7	4.72
	Antimalarial	16	10.81
Herbal agent use for self-medication	Garlic	65	43.04
	Emergency herb	15	9.93
	Tenadam	23	15.23
	Damakesie	28	18.54
	Feto	23	15.23
	Pumkin seed	5	3.31
	Ginger	22	14.56
	Kebericho	3	1.98
Reason to preferring self - medication	Minor illness	76	26.57
	Emergency case	29	10.13
	In accessibility of health facility	67	23.42
	Low costs	26	9.09
	Health facility over burdened	57	19.93
	Fear of drug side effect	31	10.83

Out of the 148 pregnant women who took modern medicine for self-medication, based on the therapeutic category of the medicines, 78 (52.7%) were analgesics/antipyretics, 36 (24.32%) were anthelmintic, and 11 (12.83%) were antibiotics.

The sources of information to use this modern drug for self-medication were 42.6% from previous experience, followed by 36.5% from Niebuhr/relatives. The most commonly used herbal agents for self-medication during pregnancy in current or previous pregnancy are garlic (Nech shinkurt) 65 (43%), damakesie 28 (18.4%), and feto 23 (18.23%). Among the total of 286 pregnant women who practice self-medication during pregnancy, the reasons reported were that the disease was not serious/minor illness 76 (26.57%), inaccessibility of health facilities 67 (23.42%), and health facilities overburdened 57 (19.93%). (See Table 4 above)

Finding from FGD were mentioned many modern and traditional medicines that pregnant women used to treat their health problems by themselves. Among the modern medicines they mentioned are: paracitamol, ibuprofen, iron sulfate, cloroqunin, albendazol, and amoxacilline are some of them. In other ways, Zingibel (ginger), Nechshnkurt (garlic), Damakasie, Koso, Emergency Herb, Tena Adam, Feto (peppergrass), Altet, Kebericho, Telba, and Tkur Azmud are mostly used traditional medicines for self-medication during pregnancy in this study area. The issue was raised by one of the respondents. "In our community, drugs commonly used for self-medication and easily available without health care institutions are paracitamol, a drug of malaria disease, anti-helmet drugs, and amoxicillin" [SmP110].

A 35-year-old pregnant woman also mentions that "treatment of headache, the white and the red one, anti-malaria, and amoxicillin are drugs we used to treat our disease as a primary prevention." [SmP111]. The other participant explains that "as I have mentioned earlier, traditional herbs and medicines are parts of our day-to-day diet, which include Nech shnkurt, Zingibel, Damakasie, Tena adam, Feto, Telba, and Tkur azmud" [SmP104]. Other participants stated the above idea as "the common modern drug found in most of our home is paracitamol, amoxicillin, and anti-helminthes (that is taken for three e days)" [SmP112].

In addition, other pregnant mothers reported that "the most commonly used modern drug used by pregnant women continuously or intermittently is iron." This is due to a lack of awareness about the use of iron for pregnant mothers and their fetus" [SmP113]. Another 29-year-old participant reveals that "the drug of anemia during pregnancy is most commonly used intermittently without a prescription that is due to fear of dyspepsia during pregnancy and aggravated by this tablet" [SmP114].

5.6 Predictors of self-medication practice during pregnancy

The outcome of logistic regression stated that the selected model was a good logistic regression model fit. Since the Hosmer-Lemeshow goodness-of-fit, the p-value was 0.897, which is greater than 0.05, it stated that the logistic model is a good fit for the data set. Additionally, the pseudo-R-Square regression result showed that the square of the correlation between the models's predicted value and the actual value, the outcome of this correlation, was 67.8%. The model explained 67.8% (neglekerke R2) of the variance in the self-medication practice during pregnancy.

In bivariate logistic regression Pregnant women's age, level of education, ANC follow-up status, gravidity, family size, having pregnancy-related problems, knowledge about the risk of self-medication, attitude towards drugs and disease, the walking distance to the health facility, and drug availability in the nearest health facility are factors with a p-value <0.25. From these factors, age of pregnant women, ANC follow-up statuses, facing pregnancy-related problems, distance from the health facility, knowledge about the risk of self-medication, and drug availability in the nearest health facility were found to be significantly associated with SMP in the multivariate logistic regression analysis. (See Table 5 below)

Table 5 Bivariat and multivariable analysis of factors associated with self-medication practice among pregnant women in, Rular kebele of cheha woreda Gurge Zone, Central Ethiopia, 2024 (n = 555)

Variables	Categories	Self-medication practice		COR (95% CI)	AOR (95% CI)	p value
		Yes	No			
Age	15-19	8	8	.318(.087-1.165)	.341(.039-3.013)	0.013*
	20-24	18	63	.340(.118-.979)	1.199(.172-8.344)	0.854
	25-29	36	118	.381(.134-1.084)	1.028(.160-6.622)	0.977
	30-34	105	40	3.278(1.149-9.354)	3.276(.531-20.201)	0.201
	35-39	97	33	3.5(1.125-10.633)	2.196(.350-13.791)	0.401
	40-44	22	7	1.00	1.00	
Educational level	No formal education	94	46	1.00	1.00	
	Read & write only	104	45	0.48(0.14-1.78)	1.45(0.15-13.9)	0.748
	Primary education	63	114	0.43(0.12-1.57)	0.95(0.1-8.99)	0.966
	Secondary	20	59	1.8(0.5-6.5)	1.44(0.16-12.99)	0.746

	education					
	College and above	5	5	2.95(0.77-11.26)	1.73(0.18-16.7)	0.633
Having ANC F/U	No	45	10	0.2(0.1-0.42)	2.94(1.08-8.0)	0.035*
	Yes	241	259	1.00	1.00	
Gravidity	Primigravida	26	106	1.00	1.00	
	Multigravida	260	163	0.15(0.1-0.25)	1.7(0.83-3.47)	0.144
Family size	Small	146	187	1.00	1.00	
	Large	140	82	0.45(0.32-0.65)	1.03(0.57-1.87)	0.918
Having px related problem	No	47	236	36.37(22.5-58.78)	0.056(0.03-0.09)	0.000*
	Yes	239	33	1.00	1.00	
Knowledge	Adequate	79	210	1.00	1.00	
	Inadequate	207	59	0.11(0.07-0.19)	2.02(1.06-3.85)	0.032*
Attitude	Favorable	53	133	1.00	1.00	
	Unfavorable	233	136	0.23(0.16-0.34)	0.73(0.38-1.42)	0.354
Distance	Short distant	38	108	1.00	1.00	
	Moderate distance	215	150	2.09(1.03-4.27)	2.51(0.9-6.9)	0.075
	Long distance	33	11	8.52(3.92-18.53)	3.52(1.13-10.9)	0.029*
Drugs availability H/C	No	176	39	0.11(0.07-0.16)	2.6(1.44-4.7)	0.002*
	Yes	110	230	1.00	1.00	

AOR adjusted odds ratio, COR crude odds ratio, CI confidence interval,*statistically significant at $p < 0.05$

Multivariate logistic regression analysis revealed that age of pregnant women was strongly associated with self-medication practice; pregnant women with being at younger age was 66% less likely to practice self-medication compared with pregnant women with being at old age [AOR=0.34, 95%CI(.039-3.013)]. In other ways, participants who had not had ANC follow-up for their current pregnancy were 2.94 times more likely to use self-medication compared with mothers who had ANC follow-up [AOR=2.94, 95%CI(1.08-8.0)].

In this study, respondents who didn't face pregnancy-related problems during pregnancy were 94.4% less likely to practice self-medication than pregnant women who had [AOR = 0.056, 95% CI (0.03-0.09)]. In addition, pregnant women who have inadequate knowledge about the risk of self-medication are two times more likely to use self-medication compared with pregnant women who have adulatory knowledge [AOR=2.02, 95%CI(1.06-3.85)]. . Living distance from a health facility was also strongly associated with self-medication practice. Respondents who travel long distances (>1 hour) were 3.52 times more likely to practice self-medication than those who travel short distances (<30 minutes) [AOR = 3.52, 95% CI (1.13-10.9)]. Similarly, mothers who lived

with the nearest health facility lacking drug and service were 2.6 times more likely to practice self-medication than those who lived with the nearest health facility having drug and service. [AOR = 2.6, 95% CI: 1.44-4.7] (See Table 5)

The focused group discussion findings indicated that pregnant women were influenced to practice self-medication by different factors like educational status of husband, household income, reception of health care provider, waiting time in the health facility, distance from health facility, and availability (dispensing) of medicine in an improper site without the handling of a health professional. And pregnant mothers use medication to treat their illness by themselves, due to different reasons like feeling of a minor illness, a low-cost alternative, time saving, the easy availability of medicines from nearby drug retail and traditional medicines from the surrounding area, the recommendation of elders, family, and neighbors, previous experience with similar illnesses, and a lack of awareness about the risk of self-medication practice. This idea was highlighted as shown below:

One of the respondents discussed that ”the feeling that the illness is not serious is the common reason to treat ourselves without medical prescription; this is due to the trend of the community consulting health professionals/visiting health care services only for serious cases according to our diagnosis [SmP110]. The other respondent also revealed that there is a gap in health professionals to create awareness about the risk of self-medication and seriousness of minor illnesses during pregnancy since minor illnesses are neglected and they are only focused on danger signs [SmP115].

One of the attendants of the focus group discussion supplemented that “Today it is very easy to buy any medicine without a health provider's prescription from the retail outlets. This is due to the weak managerial enforcement and lack of accountability; I think this weak system is the main reason for the sale of medicines without prescription” [SmP116]. A 29-year-old Yang respondent explains that the major factors of using self-medication during pregnancy are educational status, especially the educational status of the husband, which is highly affects the practice of self-medication.

6. DISCUSSIONS

This study assessed the prevalence and associated factors of self-medication practice among pregnant women in rural kebele of Cheha woreda, Gurage Zone, central Ethiopia, in 2024. More than half (51.53%) of the pregnant women practiced self-medication during the current and previous pregnancy. The current study found out that a considerable prevalence of pregnant women practiced self-medication with at least one modern medicine, herbal medicine and/or practice intermittent or continued use of a medication during the current or previous pregnancy without consultation of health professionals.

The prevalence of SMP during pregnancy in the present study is greater than the studies done in different major urban centers of Ethiopia like in Gondar 44.8%(17), in Addis Ababa 26.6% (29), in Bahirdar Town 25% (30), in Nekemte 21.5% (31), and in Jimma 20.1% (32) found that pregnant women practice self-medication during their current and previous pregnancy. This significant difference might be because of the low accessibility of prescribed medications, lack of health facilities in rural area, and differences in healthcare systems in terms addressing health care service are important factors. In addition, this study included both modern and herbal medicine use among pregnant women, indicating that traditional medicine is a majorly available source of healthcare in rural areas.

In addition the prevalence of current study greater than the prevalence of SMP among pregnant women conducted in rural community, like study in Gedeo Zone South Ethiopia, 40.4% (34) and study in rural areas of Ethiopia conducted in the Southwest Shewa Zone of Oromia Region 19.8% (22).The possible reason for this difference may be due to the cultural background of the community to use traditional medicines that can affect the health of the mothers as well as the fetus, due to poor awareness of pregnant women in study area regarding medicines that need urgent management, and the difference in type of medications considered in the studies since present study include modern drugs, traditional/home mead medicines and continuous/intermittent use of prescribed drugs as self-medication practice but the above study use only using modern and traditional medicine as self-medication practice.

The prevalence of SMP in the study area is comparable with a report from Africa the pooled prevalence of self-medication among pregnant women was 55% (12). And a report from Makongoro, Tanzania (28) the prevalence of self-medication among pregnant women was 46.24%.

A multinational web-based study shows that the observed prevalence of SMP is surprisingly lower than the findings from developed country like, in Finland 84.8%, in UK 82.1%, in Sweden 79.3% and in Switzerland 72.5% (11). The relatively lower prevalence of SMP in our study may be due to people in developed nation have easily accessibility of the medicine especially modern drugs, unlike people in developing nations. Furthermore, the difference in type of medications considered in the studies, study period, and the difference in residence can cause this type of disparity in prevalence of SMP during pregnancy.

The reasons why pregnant women medicate themselves without medical consultation were minor illness (belief that illness was not serious) (26.57%) followed by in accessibility of health facility (living distant from health facility (23.42%)), health facility overburdened (19.93%) and ease access to medications. The feeling that illness was not serious to medicines themselves without prescription, might be due to the trend of the community consulting health professionals /visiting health care service only for serious cases according to their diagnosis. This is explained by the qualitative findings, which revealed that there is a gap in health professional to create awareness about risk of self-medication and seriousness of minor illness during pregnancy, since minor illnesses are neglected and they are only focused on danger signs.

In present study Analgesics/antipyretics, Anti-helmet drugs and Anti-biotic were the most commonly used drug category and Garlic (nechshinkurt), Damakesi and Tena adam are commonly used traditional drugs by pregnant women to medicate them without physician order. This report is almost similar with the finding of study in Addis Ababa were the most commonly used classes of medicine for self-medication by the pregnant women are analgesics, antibiotics, and anthelmintic (29)and is comparable with a study done at Gedio Zone (37). In addition the qualitative report show that the most commonly used modern drug used by pregnant women continuously/intermittently is iron sulfate. This may be due to lack of awareness about the use of iron sulfate for pregnant mothers and their fetus, and due to fear of dyspepsia common during pregnancy and aggravated by this tablet. In the present study, qualitative report showed that

Paracetamol and Amoxicillin were the most commonly used medications during pregnancies and a similar finding was reported from Goba of Ethiopia, Gedio and Peru(24, 28, 34) .

Concerning the associated factors with SMP, this study demonstrated independent factors associated with self-medication practice during pregnancy. Old age, not attending ANC follow up, facing pregnancy related problem, living distant from the health facility, and unavailability of drugs in nearest health facility were independent predictor variables for self-medication practice. In current study, pregnant mothers with an age greeter than 30 were more likely to use self-medication as compared to those who were less than or equal to 30 years old. The finding implicates that providing counseling for older pregnant women is important. However, this result was opposite to a study conducted at selected health centers in Ethiopia's North Wollo Zone that showed, pregnant mothers with an age less than 35 were more likely to use self-medication as compared to those who were greater than or equal to 35 years old (5).The difference might be due to the difference in the sociocultural context of the two study areas, type of medications considered in the studies, study period, and the difference in residence can cause this type of difference in prevalence of SMP during pregnancy.

Pregnant women who have no ANC follow up for current pregnancy were about three times more likely to practice self-medication compared with pregnant women who had ANC follow up. This result was consistent with the study done on Goba and Gedio; where having ANC follow up was found to have a protective factor(34, 38). This implies that women were informed and received health education during antenatal care; protect them from using self-medication and enforce them to seek health care professionals whenever they had any health concerns during pregnancy.

In this study, pregnant women who faced pregnancy related problems like Abortion, Hyperemesis gravidrum, Pregnancy related hypertension, bleeding during pregnancy, and congenital abnormality during pregnancy were nearly thirteen times more likely to practice self-medication than pregnant women who had not faced. This study was consistent with the study done in Jimma, Gedio and Addis Ababa (29, 30, 32). Pregnant women who are living distant from the health facility were about 8.5 times more likely to practice self-medication compared to those who live nearest to health facility. This could be due to the transfer of information and having easy access to health care service whenever health problems happen to pregnant women.

Studies have also shown that living close to health facilities improves mothers' awareness of basic maternal health care and utilization of health care services (5, 37, 38).

The current study also concludes that availability of essential drugs and services in the nearest health facility were less likely to practice self-medication compared to their counterparts. This might be due to the fact that pregnant women with lack of essential drugs and services in nearby health facility prone to use self-medication as alternative. This finding explained by the qualitative report that, getting health care without essential drugs and services are equivalent to self-medication. Because those drugs that are not available in nearby health facility found in nearby drug retails that selling drugs without prescription in expensive price and persons who can't afford this price use traditional herbs as alternative.

7. CONCLUSIONS

The prevalence of self-medication among rural pregnant women in the study is a public health problem with potential harmful consequences for the health of mothers and fetuses. The current study highlighted the magnitude of self-medication use among pregnant women in rural keel of Cheha Woreda Gurage Zone, central Ethiopia, which is greater than the magnitude of urban settings in Ethiopia. It also assessed the reasons, sources, commonly used medicines, and associated factors of self-medication that need strict interventions and measures to ensure safe use of medications in pregnant women. The major reasons for SMP in this study area were the belief that illness was not serious, the accessibility of health facilities, and overburdened health facilities. Otherwise, analgesics/antipyretics, anti-helmet drugs, and antibiotics were the most commonly used drug categories, and garlic (nechshinkurt), damakesi, and tena adam are commonly used traditional drugs by pregnant women to medicate them without a physician's order. In addition, iron sulfate is the most commonly medicated continuously or intermittently without a physician's order. Old age, facing pregnancy-related problems, and living far from the health facility were significantly associated with a higher probability of practicing self-medication. Contrarily, having ANC follow-up and the availability of drugs in the nearest health facility were associated with a lower probability of SMP or were protective factors.

8. STRENGTH

This study has tried to complement the quantitative data with a qualitative method. So the implementation of the mixed method could be the strong side of the study. And the study was community-based, which is best for generalizing the findings to the overall population of the study area.

9. LIMITATION

It is more difficult to establish a cause-and-effect relationship between the predictor and outcome variables because of the cross-sectional character of the study design. Because pregnant women were expected to remember details from their prior experiences, memory bias may have an impact on the study's conclusions. The study only covered rural women; it is not possible to extrapolate the findings to Cheha woreda or any other urban area. Furthermore, there may be response bias in the study among important informants. As a result, prospective observational studies are encouraged for further investigation.

10 . RECOMMENDATION

For Gurage zone health department, an awareness-building campaign and health education for pregnant mothers as well as the general population, focusing on rural areas, need to be advocated. In addition, a strict and continuous regulatory body's involvement in the control of medication distribution and malpractice is necessary.

For policymakers and program designers, recommendations and guidelines that ANC providers can use to reduce the risk of self-medication use during pregnancy are important. Furthermore The strengthening of social networking and facilitation of discussion among pregnant women may help in sharing experiences to prevent unhealthy practices like self-medication. In addition, health services should be expanded to optimize the delivery of health care and education to rural communities so that families take responsibility for their health.

Health care providers also need to be engaged in the promotion of safe use of medication for pregnant mothers. Finally, we recommend conducting a nationally representative study involving diversified communities in the country and further research to assess the consequences of self-medication practices on pregnancy outcomes.

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ANNEXES

Annex I: English Version of Subject Information Sheet, Consent Form, Questionnaires and FGD Discussion Guide

Subject Information Sheet

Hello, my name is _____ and I am a student at Wolkite University School of medicine and Health science, department of Nursing. Currently I am conducting research to assess Self-medication Practice and associated factors among pregnant women in rural kebeles of cheha woreda of Gurage zone. Thus, I am requesting your cooperation to answer the survey question which will take about 20 minutes to complete. Participation in this survey will be voluntary, and if you don't want to participate or if there is any question you don't want to answer you can skip to the next, or if you choose not to participate you could withdraw at any time. I assure all information that you provide will remain strictly private, and confidentiality of responses would be maintained during and after data collection. Only numbers will be assigned to each copy and no name will be required on the questionnaire. The numbers would facilitate data entry and analysis, so no one can link your identity with the registration numbers. Your individual answers will not be discussed with the staff members. Findings from this research are believed to serve health service managers to design evidence based programs on self-medication practice prevention strategy. Moreover, studies in similar topics which may be conducted in a different scale and depth can make use this study as a spring board. No risk is found by participating in this study. I hope you will participate in the survey as your feedbacks are important. Thank you for your willingness to be my study participant and taking time to interviewed study questionnaire.

If you need further clarification about the survey, please contact me any time via

Mobile no: 091085585/0961422277 Shikuria Abdela.

Email: shikuriaa@gmail.com

Consent Form

I understand all conditions stated above. I have understood that participation in this study is entirely voluntarily. I have been told that my answers to the questions will not be given to anyone else and no reports of this study ever identify me in any way. Therefore, I am ready and willing to participate in this study.

If respondent does not agree to be interviewed thanks her and go to the next respondent if respondent say YES continue

Participant's signature _____ Date _____

Supervisor: Name _____ signature_____

Date_____/_____/____E.C. Time Interview Started: Hour: _____ Minute: _____

Questionnaire No_____ Household ID

No_____ Time Interview Ended: Hour: _____ Minute: _____

Name of interviewer: _____

Questionnaires

Circle the appropriate response		
Part I: Socio-demographic characters of pregnant woman		
Code	Questions	Response
101	Where is your Address:	Kebele _____ House number _____
102	How old are you?	_____ years
103	What is your marital status?	1. Single 2. Married 3. Divorced 4. Widowed 5.Separated
104	What is your religion?	1. Orthodox 2. Catholic 3. Protestant 4. Muslim 5. Other (specify)_____
105	What is your Ethnic group?	1. Gurage 2. Tigre 3. Oromo 4. Sidama 5. Wolayta 6. Other (specify)----------
106	What is your level of education?	1.No formal education 2. Read and write 3. Primary (1-8) 4. Secondary (9-12) 5.Collage and above
107	What is educational level your husband?	1.No formal education 2. Read and write

		3. Primary (1-8) 4. Secondary (9-12) 5.Collage and above
108	What do you do for living? Or What is your occupation?	1. House wife 2. Farmer 3. Government employee 4. Merchant 5. Student 6. Daily laborer 7. Other (specify)_____
109	What is your husband occupation?	1. Farmer 2. Government employee 3. Merchant 4. Student 5. Daily laborer 6. Other (specify)_____
110	How much your house holds monthly Income?	_____ETB
111	How many people live in your house?	_____
Part II Obstetrics history related questions		
201	Did you receive antenatal care during current pregnancy?	1. yes 2. No
202	If answer yes for question # 201, How many times did you receive antenatal care during current pregnancy?	_____ visits
203	What is your gestational age?	_____month
204	How many total pregnancies you had including abortion/still births	_____pregnancy
205	How many deliveries you had including still births/neo-natal deaths?	_____Times

206	Have you had encountered pregnancy-related problems in your current or previous pregnancy	1. yes 2. no
207	If answer yes for question # 204, What type of pregnancy-related -problem do you faced? (Can circle more than one)	1. Abortion 2. Hyperemesis gravid rum 3. Pregnancy related hypertension 4. bleeding during pregnancy 5. Congenital abnormality 6. Other(specify)_____
208	Have you faced birth complication(s) during your previous labor and delivery?	1. Yes (for self) 2. Yes (for baby) 3. Yes (both self and baby) 4. No
Part III: Self-medication practice related information		
301	Was there any health problem that needs medicine in your current pregnancy?	1. Yes 2. No
302	If answer yes for question # 301 which Disease or symptom	1. Nausea/Vomiting 2. Headache/fever 3.Urinary tract infection 4.Common cold 5.Despepsia 6. Other(specify)_____
303	Do you try to treat this disease/symptom on # 302 by yourself without medical advice?	1. Yes 2. No
304	What was the reason for preferring it? (Can circle more than one)	1. Low cost alternative 2. The illness was minor 3. Emergency condition 4. Inaccessibility of health care service 5. No satisfaction from health care providers

		6. Health facilities are over burdened 7. Previous experience with similar ailments. 8.Others(specify) _____
305	Have you ever taken modern drug from nearby drug store during current or previous pregnancy without medical prescription for self-medication	1.Yes 2.No
306	What was the category of the medicinal agent used? (Could you show if there is any leftover) (Can circle more than one)	1.Analgesic /antipyretic 2.Antimalarial 3.Antimicrobial 4.Anthelminthic 5.Other(specify)_____
307	What was the Source of information for choosing self-medication? (Can circle more than one)	1. Personnel of drug retail outlet 2. Other health professionals 3. Previous experience 4. Neighbor/relative 5.Other(specify)_____
308	Have you ever taken herbal drug during current or previous pregnancy for self-medication	1.Yes 2.No
309	What was the agent used? (Can circle more than one)	1.Zingiber officinale (ginger) 2. Allium sativum (garlic) 3.Ocimum (basil or damakasie) 4. Hagenia abyssinica (koso) 5.Taverniera abyssinica (emergency herb) 6.Ruta chalepensis (rue or tena adam) 7. Lepidium sativum (peppergrass / feto) 8. Coffea arabicalinn (altet)

		9.Others specify_____
310	What was Outcome of the Self-medication? (Can circle more than one)	1. Improved the health condition 2. No change 3. Worsen health condition 4. Other (specify) _____
311	Do you take medicine given to other person/disease by health provider during current or previous pregnancy for self-medication?	1.Yes 2..No
312	What was the source of drugs? (Can circle more than one)	1. Neighbors/Relative 2. Leftover from previous use 3. Family 4. Other (specify) _____
313	Do you hoard modern drugs in your home/ take medicine available in the home during current or previous pregnancy for self-medication?	1.Yes 2.No
314	Why do you hoard modern drugs in your home?	1. Leftover 2. For emergency use 3. To treat similar ailment 4. Other (specify) _____
315	To what category do they belong, could you show sample of the drugs? (Can circle more than one)	1. Analgesic /antipyretic 2. Antimalarial 3.Antimicrobial 4.Anthelminthics 5. Other (specify) _____
316	Do you practice intermittent or continued use of a medication prescribed by a physician for chronic or recurring diseases or symptoms during current or previous pregnancy for self-medication?	1.Yes 2.No

317	What is Your plan for future about the same perceived illness /symptom?	1. Continue self-medication 2. Look for modern health care 3.Other(specify)_____
Part IV Knowledge related information		
401	Did you heard about self- medication practice?	1.Yes 2. No
402	Do you know self-medication practice can affect the health of pregnant mother and fetus?	1.Yes 2. No 3.I don't know
403	What are your sources of information on risks of self-medication practice during pregnancy?	1. Radio/TV/social media 2. Newspaper/magazine 3. Health care providers 4. Family and friends 5. Health extension workers 6. Other(Specify)
404	What do you think risk of self- medication on mother during pregnancy? (Can circle more than one)	1. Abortion 2. drug reaction 3. medical/surgical problem 4.pre-term labor 5. other(specify)_____ 6.Idon't know
405	What do you think risk of self- medication on fetus during pregnancy? (Can circle more than one)	1.still birth 2.congenital abnormality 3.low birth weight 4. intrauterine growth retardation 5. other(specify)_____ 6.Idon't know
406	Is self-medication used for treating minor illness/minor injuries	1.Yes 2 No
407	Taking vitamin without prescription is also considered as one of self-medication practice?	1.Yes 2 No

408	Do you receive maternal health education and counseling service given by health care provider?	1.Yes 2 No
Part V Attitude related information		
501	All medicines can be harmful to the fetus	1. Strongly disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly agree
502	Self –medication is better than treating by health care provider in health institution	1. Strongly disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly agree
503	Health care providers are cold blooded	1. Strongly disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly agree
504	Pregnant women have a higher threshold for using self- medication compared to not pregnant	1. Strongly disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly agree
505	Many unborn children are saved because the mother take medicines during pregnancy when they have ill ness	1. Strongly disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly agree
506	It is better for the fetus if the mother take medicines and get well than having untreated	1. Strongly disagree 2. Disagree

	illness during pregnancy	3. Uncertain 4. Agree 5. Strongly agree
507	Prescribing too many medicines to pregnant women is advantageous	1. Strongly disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly agree
Part VI Health service related information		
601	Is there a health facility in your setting	1.Yes 2.No
602	If yes for above question, how long time it takes to reach by foot?	_____
603	Are there a basic health services available in the facility?	1.Yes 2.No
604	Are there basic drugs available in the facility?	1.Yes 2.No
605	If answer yes for# 604 what look like the cost of the drug?	1.Costy 2.Fair 3.Cheap 4.Free 5. other(specify)_____

Thank you

FGD Discussion Guide

Name of Moderator_____

Discussion Begin at_____ (Local time) End at _____duration_____ (hour/min)

Participants: Pregnant women having previous experience of pregnancy and member of women development army, and women rural drug vendors who lived in the study area

Code of interviewee_____

Keble_____

1. What is your perception toward self-medication practice?

2. What do you think the factors for self-medication?

3. What are the major risks of self-medication during pregnancy?

4. What do you think about the benefit of self-medication compared with the risk?

5. What are the major modern / traditional medicines pregnant women used for self-medication?

6. In your community, do husbands discourage their pregnant wives to practice self-medication? Why? How can we help pregnant women to thrift from self-medication?

Annex II: Amharic Version of Subject Information Sheet, Consent Form, Questionnaires and FGD Discussion Guide

የተሳታፊ መረጃ መስጫ ወረቀት

ሰላም፣ ስሜ ----------እባላለሁ፡፡ በወልቂጤ ዩኒቨርሲቲ የህክምናና ጤና ሳይንስ ትምህርት ቤት፣ በነርሲንግ ት/ክፍል የድህረ ምረቃ ተማሪ ነኝ፡፡ በአሁኑ ወቅት በጉራጌ ዞን በቸሀ ወረዳ በገጠር ቀበሌዎች ውስጥ በሚገኙ ነፍሰጡር ሴቶች ያለሃኪም ትዕዛዝ መድኃኒት የመውሰድ ልማድና ከዚህ ጋር ተያያዥነት ያላቸውን ምክንያቶች ለመገምገም ጥናት እያካሄድኩ ነው፡፡ በመሆኑም 20 ደቂቃ የሚፈጅ የቅየሳ ጥያቄ ለመመለስ የእርስዎ ትብብር እየጠየቅኩ ነው፡፡ እርስዎ የሚሰጡኝ መረጃዎች በሙሉ ጥብቅ ሚስጥር ሆነው እንደሚቀጥሉ አረጋግጥላለሁ፣ እናም መረጃዎችን በሚሰበስብበት ጊዜ እና በኋላ ምላሾች በምሥጢራዊነት ይቀጥላሉ፡፡ ለእያንዳንዱ ቅጂ ቁጥሮች ብቻ የሚመደቡ ሲሆን በጥያቄው ላይ ምንም ስም አይጠየቅም፡፡ ቁጥሮቹ የመረጃ መግቢያ እና ትንተናን የሚያቀላጥፉ ናቸው፡፡ በመሆኑም ማንም ሰው የእርስዎን ማንነት ከምዝገባ ቁጥሩ ጋር ሊያያይዘው አይችልም፡፡ የእርስዎ የግለሰብ መልሶች ከሰራተኞቹ ጋር አይወያዩም.. ከዚህ ጥናት የተገኙ ግኝቶች ያለሃኪም ትዕዛዝ መድኃኒት የመውሰድ ልማድ በመከላከልና በመቆጣጠር ረገድ ማስረጃ ላይ የተመሠረቱ ፕሮግራሞችን ለማውጣት የሚመለከታቸው አካላት እንደሚያገለግሉ ይታመናል ፡፡ ከዚህም በላይ በተለያየ መጠንና ጥልቀት ሊመሩ በሚችሉ ተመሳሳይ ርዕሰ ጉዳዮች ላይ የተደረጉ ጥናቶች ይህን ጥናት እንደ ምንጭ ሊጠቀሙበት ይችላሉ፡፡ በዚህ ጥናት በመሳተፍ ምንም ዓይነት አደጋ አያመጣም ፡፡ የእርስዎ አስተያየት አስፈላጊ በመሆኑ በጥናቱ ላይ እንደምትሳተፉ ተስፋ አደርጋለሁ፡፡ የጥናቱ ተሳታፊ ለመሆን እና ጊዜ ወስደው ቃለ መጠይቅ ለመደረግ ስለፈቀዳችሁ አመሰግናለሁ፡፡

ስለ ጥናቱ ተጨማሪ ማብራሪያ ካስፈለገዎ, እባክዎ በማንኛውም ጊዜ ያነጋግሩኝ፡፡

ሽኩሪያ አብደላ ስልክ፡- 091085585/ 0961422277

Email: shikuriaa@gmail.com

የስምምነት ፎርም

ከላይ የተዘረዘሩትን ሁኔታዎች በሙሉ ተረድቻለሁ ። በዚህ ጥናት መሳተፍ ሙሉ በሙሉ በፍቃደኝነት የሚደረግ መሆኑን ተረድቻለሁ። ለጥያቄዎቼ የሰጠኋቸው መልሶች ለሌላ ሰው እንደማይሰጡና በዚህ ጥናት ላይ በምንም መንገድ የኔን ሀሳብ ተለይቶ እነደማይታወቅ ተነግሮኛል ። ስለዚህ በዚህ ጥናት ለመሳፈል ዝግጁና ፈቃደኛ ነኝ ።መልስ ሰጪዋ ቃለ መጠይቅ ለማድረግ ካልተስማማች አመስግነን ወደ ቀጣይ መመሄድ። መልስ ሰጪዋ ቃለ መጠይቅ ለማድረግ ከተስማማች የሚከተሉትን መመሳት

የተሳታፊ ፊርማ_____

የተቆጣጣሪ ስም_____ ፊርማ_____

ቀን _____/_____/_____ዓ.ም.

ቃለ መጠይቅ የተጀመረበት: ሰዓት:- _____ ደቂቃ: _____

የጥያቄ ቁጥር _____ የቤት ቁጥር_____

ቃለ መጠይቅ ያለቀበት: ሰዓት:- _____ ደቂቃ: _____

የጠያቂው ስም: _____ፊርማ ----------

መጠይቅ

ተገቢውን ምላሽ አክብብ		
ክፍል 1- የእርጉዝ ሴት ማህበረ-ነክ ገጸ-ባህሪያት		
መ.ቁ	ጥያቄ	መልስ
101	አድራሻሽ የት ነው ? :	ቀበሌ _____ የቤት ቁጥር _____
102	ዕድሜሽ ስንት ነው?	_____ዓመት
103	የጋብቻ ሁኔታሽ ምንድን ነው?	1. ያላገባች 2. ያገባች 3.የ ፈታች 4. የሞተባት 5.ተለያይታ የምትኖር
104	ሃይማኖትሽ ምንድን ነው?	1.ኦርቶዶክስ 2. ካቶሊክ 3. ፕሮቴስታንት 4. ሙስሊም 5. ሌላ ካለ ይገለጽ----------
105	ብሄርሽ ምንድነው?	1. ጉራጌ 2. ትግሬ 3. ኦሮሞ 4. ሲዳማ 5. ወላይታ 6. ሌላ ካለ ይገለጽ ----------
106	የትምህርት ደረጃሽ ምንድን ነው?	1. መደበኛ ት/ት አልተማርኩም 2. አንብቦ መጻፍ 3. አንደኛ ደረጃ (1-8) 4. ሁለተኛ ደረጃ (9-12) 5.ኮላጅ እና በላይ
107	የባለቤትሽ የትምህርት ደረጃ ምንድ ነው?	1. መደበኛ ት/ት አልተማርኩም 2. አንብቦ መጻፍ 3. አንደኛ ደረጃ (1-8) 4. ሁለተኛ ደረጃ (9-12) 5.ኮላጅ እና በላይ
108	ስራሽ ምንድን ነው?	1. የቤት እመቤት 2. ገበሬ

		3. የመንግስት ሰራተኛ 4. ነጋዴ 5. ተማሪ 6. የቀን ሠራተኛ 7. ሌላ ካለ ይገለጽ _____
109	የባለቤትሽ ስራ ምንድን ነው?	1. ገበሬ 2. የመንግስት ሰራተኛ 3. ነጋዴ 4. ተማሪ 5. የቀን ሠራተኛ 6. ሌላ ካለ ይገለጽ _____
110	የቤተሰብሽ ወራዊ የገቢ መጠን ምን ያህል ነው?	_____ብር
111	ቤትሽ ውስጥ ስንት ሰው ይኖራል?	_____ ሰው
ክፍል ሁለት ከእርግዝና ጋር የተያያዙ መረጃዎች		
201	በዚህ እርግዝና የእርግዝና ክትትል እያረግሽ ነው?	1. አዎ 2. አይደለም
202	ለተ.ቁ 201ጥያቄ መልስ አዎ ከሆነ ስነት ጊዜ አደረግሽ?	_____ ጊዜ
203	እርግዝናሽ ስንት ወር ሆኖታል?	_____ወር
204	ጠቅላላ ስንት እርግዝና ነበረሽ? ውርጃና ሞቶ የተወለደን ጨምሮ	_____እርግዝና
205	ጠቅላላ ስንት ወልደሻል? ሞቶ የተወለደና ተወልዶ የሞተ ጨምሮ	_____ጊዜ
206	ከዚህ በፊት/በአሁኑ እርግዝና ከእርግዝና ጋር የተያያዙ ችግሮች አጋጥመውሽ ነበር?	1. አዎ 2. አይደለም
207	ለተ.ቁ 206 ጥያቄ መልስሽ አዎ ከሆነ ምን አይነት ችግር አጋጥሞሽ ታውቂያለሽ?(ከአንድ በላይ መጥቀስ ይቻላል)	1. ውርጃ 2. እርግዝና ተዛማጅ ህመም 3. እርግዝና ተዛማጅ የደም ግፊት 4. በእርግዝና ወቅት የደም መፍሰስ 5. የጽንስ የአፈጣጠር ችግር

		6. ሌላ ካለ ይገለጽ_____
208	ቀደም ሲል በእርግዝናና በወሊድሽ ወቅት ችግር አጋጥሞህ ታውቂያለሽ?	1. አዎ (ለራሴ) 2. አዎ (ለሕጻኑ) 3. አዎ (ለራሴና ለህፃኑ) 4. አላጋጠመገኝም
ክፍል ሶስተኛ፦ በእርግዝና ጊዜ ያለሃኪም ትዕዛዝ መድሀኒት የመውሰድ ልማድ የተያያዙ መረጃዎች		
301	በዚህ እርግዝና መድሃኒት የሚያስፈልገው የጤና ችግር አጋጥሞሽ ያውቃል?	1. አዎ 2. አይደለም
302	ለተ.ቁ 301ጥያቄ መልስሽ አዎ ከሆነ ለየትኛው በሽታ /ህመም?(ከአንድ በላይ መጥቀስ ይቻላል)	1.ለትውከት/ማቅለሽለሽ 2.ለራስ ምታት/ትኩሳት 3.ለሽንት ትቦ ኢንፌክሽን 4.ለጉንፋን 5.ለጨጉራ ህመም 6. ሌላ ካለ ይገለጽ_____
303	ለዚሁ በሽታ/ህመም በራስሽ ለመታከም ሞክረሽ ነበር?	1. አዎ 2. አይደለም
304	ለጥያቄ ቁጥር 303 አዎ የሚል መልስ ከተሰጠ ምክነያቱ ምን ነበረ?(ከአንድ በላይ መጥቀስ ይቻላል)	1.ዝቅተኛ ዋጋ ያለው አማራጭ 2.ህመሙ ቀላል ነበር 3.ድንገተኛ አደጋ 4.የጤና አጠባበቅ ተቋማት አለመኖር 5.ከጤና አጠባበቅ ተቋማት እርካታ የለም 6.የጤና ተቋማት የተጨናነቁ ስለሆኑ 7.ከዚህ ቀደም ተመሳሳይ ህመሞች ጋር ተሞክሮ 8. ሌላ ካለ ይገለጽ_____
305	በዚህ/በቀደምት እርግዝና ወቅት ያለ ሃኪም	1. አዎ

	ትዕዛዝ የወሰድሽው የዘመናዊ ህክምና መድሃኒት ነበረ?	2. አይደለም
306	ለጥያቄ ቁጥር 305 መልስ አዎ ከተሰጠ, ጥቅም ላይ የዋለው መድሀኒት ምድብ ምን ዓይነት ነበር? (ከአንድ በላይ መጥቀስ ይቻላል)	1. የህመም ማስታገሻ 2. የወባ በሽታ 3. ፀረ-ተባይ መድኃኒት 4. የትላትል 5. ሌላ ካለ ይገለጽ_____
307	ያለሃኪም ትዕዛዝ መድሃኒት ለመውሰድ የመረጃ ምንጭሽ ኬት ነው? (ከአንድ በላይ መጥቀስ ይቻላል)	1. የመድሀኒት ሻጩ 2. ሌሎች የጤና ባለሙያዎች 3. ከዚህ በፊት ተሞክሮ 4. ጎረቤታ/ዘመድ 5. ሌላ ካለ ይገለጽ_____
308	በዚህ/በቀደምት እርግዝና ወቅት የወሰድሽው የባህላዊ ህክምና መድሃኒት ነበረ?	1. አዎ 2. አይደለም
309	ጥቅም ላይ የዋለው ባህላዊ መድሀኒት ምን ዓይነት ነበር?(ከአንድ በላይ መጥቀስ ይቻላል)	1.ዝንጅብል 2.ነጭ ሽንኩርት 3.ዳማ ከሴ 4.ኮሶ 5.የድንገተኛ ቅጠል 6.ጤና አዳም 7.ፌጦ 8.አልቴት 9. ሌላ ካለ ይገለጽ_____
310	በዚህ/በቀደምት እርግዝና ወቅት ለሌላ ሰው በሀኪም ትዕዛዝ የተሰጠ የዘመናዊ ህክምና መድሃኒት ወስደሽ ነበረ?	1. አዎ 2. አይደለም
311	የተጠቀሰው ዘመናዊ መድኃኒት ምንጩ	1. ከጎረቤታ/ዘመድ

	ቤት ነበር?(ከአንድ በላይ መጥቀስ ይቻላል)	2. ከቀድሞ አጠቃቀም የተረፈ 3. ከቤተሰብ 4. ሌላ ካለ ይገለጽ_____
312	ዘመናዊ መድኃኒቶች ቤት ውስጥታከማቻለሽ? ወይም በዚህ/በቀደምት እርግዝና ወቅት ቤት ውስጥ የቆየ መድሃኒት ወስደሽ ታውቂያለሽ?	1. አዎ 2. አይደለም
313	ለጥያቄ ቁጥር 312 መልስሽ አዎ ከሆነ ለምን?	1. የተረፈ 2. ለአስቸኳይ ጊዜ አጠቃቀም 3. ተመሳሳይ ህመምን ለማከም 4. ሌላ ካለ ይገለጽ_____
314	እነዚህ መድኃኒቶች ምን ዓይነት እንደሆኑ ለናሙና ያህል ልታሳይ ትችያለሽ?(ከአንድ በላይ መጥቀስ ይቻላል)	1. የህመም ማስታገሻ 2. የወባ በሽታ 3. ጸረ-ተህዋሲያን 4. የትላትል 5. ሌላ ካለ ይገለጽ_____
315	በዚህ/በቀደምት እርግዝና ወቅት ለተለያዩ ህመሞች የተሰጡሽ መድሃኒቶች ያለ ሀኪም ትዕዛዝ በቀጣይነት/አልፎ አልፎ ወስደሽ ታውቂያለሽ?	1. አዎ 2. አይደለም
316	ለተመሳሳይ ህመም የወደፊት ዕቅድሽ ምንድነው?	1. ያለሃኪም ትዕዘዝ እቀጥላለሁ 2. ዘመናዊ የጤና እንክብካቤን እጠቀማለሁ 3. ሌላ ካለ ይገለጽ_____
ክፍል አራት፦ እውቀትን ተዛማጅ መረጃዎች		
401	ያለሃኪም ትዕዛዝ መድሃኒት ስለመውሰድ ልማድ ሰምተው ያውቃሉ?	1. አዎ 2. አይደለም
402	ያለሃኪም ትዕዛዝ የሚወሰድ መድሃኒት በእናትና በጽንስ ጉዳት ያመጣልን?	1.አዎ 2. አይደለም

403	መልስዎ አዎ ከሆነ መረጃውን ኬት አገኙ?	1.ከሬድዮ/ቴሌቪዢን 2.ከጋዜጣ/መጽሄት 3.ከጤና ባለሙያ 4.ከቤተሰብ/ጓደኛ 5. ሌላ ካለ ይገለጽ_____
404	በእናት ላይ ምን አይነት ችግር ሊያስከትል ይችላል ብለው ያስባሉ?(ከአንድ በላይ መጥቀስ ይቻላል)	1. ውርጃ 2. የመድሃኒት አለመስማማት 3. ጠቅላላ የጤና ችግር 4.ወቅቱ ያልደረሰ ምጥ 5. ሌላ ካለ ይገለጽ_____ 6. አላውቅም
405	በጽንስስ ላይ ምን አይነት ችግር ሊያስከትል ይችላል?(ከአንድ በላይ መጥቀስ ይቻላል)	1.ያለጊዜው መወለድ 2.አፈጣጠር ላይ የተመሰረተ ችግር 3.ዝቅተኛ የወሊድ ክብደት 4.በማህጸን ውስጥ እድገት መገታት 5. ሌላ ካለ ይገለጽ_____ 6.አላውቅም
406	የእናቶች የጤና ትምህርት እና የምክር አገልግሎት በጤና ባለሙያዎችአግኝተው ያውቃሉ?	1.አዎ 2 አላገኘሁም
407	ቪታሚኖችን በራስ ፈቃድ ገዝቶ መጠቀም ያለ ሀኪም ትዕዛዝ መድሃኒት እንደመውሰድ ይቆጠራልን?	1.አዎ 2.አይደለም
ክፍል አምስት አመለካከት ተዛማጅ መረጃዎች		
501	ሁሉም መድሃኒቶች በጽንስ ላይ ችግር ሊያመጡ የችላሉ	1.በጣም አልስማማም 2. አልስማማም 3.መጠነኛ 4.እስማማለሁ

		5. በጣም እስማማለሁ
502	ጤና ተቋም ሄዶ በባለሙያ ከመታከም ይልቅ በራስ መድሀኒት ገዝቶ መውሰድ ይሻላል	1.በጣም አልስማማም 2. አልስማማም 3.መጠነኛ 4.እስማማለሁ 5. በጣም እስማማለሁ
503	የጤና ባለሙያዎች ክፉዎች ናቸው	1.በጣም አልስማማም 2. አልስማማም 3.መጠነኛ 4.እስማማለሁ 5. በጣም እስማማለሁ
504	እርጉዝ እናቶች ከሌሎች ይልቅ ያለሃኪም ትዕዛዝ መድሀኒት የመውሰድ እድል አላቸው	1.በጣም አልስማማም 2. አልስማማም 3.መጠነኛ 4.እስማማለሁ 5. በጣም እስማማለሁ
505	እርጉዝ እናቶች ሲታመሙ መድሀኒት በመውሰዳቸው ምክንያት ብዙ ጽንሶች መዳን ይችላሉ	1.በጣም አልስማማም 2. አልስማማም 3.መጠነኛ 4.እስማማለሁ 5. በጣም እስማማለሁ
506	እርጉዝ እናቶች ሲታመሙ መድሀኒት መውሰዳቸው ለጽንሱ ደህንነት ካለመታከም የተሻለ ነው	1.በጣም አልስማማም 2. አልስማማም 3.መጠነኛ 4.እስማማለሁ 5. በጣም እስማማለሁ
507	ለእርጉዝ እናቶች ብዙ መድሃኒቶች ማዘዝ ጠቃሚ ነው	1.በጣም አልስማማም 2. አልስማማም

		3.መጠነኛ 4.እስማማለሁ 5. በጣም እስማማለሁ
ክፍል ስድስት የጤና አገልግሎት ተዛማጅ መረጃ		
601	በአካባቢሽ የጤና ተቋም አለ?	1.አዎ 2.የለም
602	ከላይ ለተጠየቀው ጥያቄ መልስሽ አዎ ከሆነ በእግር ለመድረስ ምን ያህል ጊዜ ይፈጃል?	----------ደቂቃ
603	በተቋሙ መሰረታዊ የጤና አገልግሎቶች ይገኛሉን?	1.አዎ 2.የለም
604	በተቋሙ መሰረታዊ መድሃኒቶች ይገኛሉን?	1.አዎ 2.የለም
605	ለጥያቄ ቁጥር 604 መልስ አዎ ካልሽ የመድሃኒት ዋጋ ምን ይመስላል?	1.ይወደዳል 2.መጠነኛ ነው 3.ዝቅተኛ ነው 4.ነጻ ነው

አመሰግናለሁ

የFGD የውይይት መመሪያ

የውይይት መሪ ስም_____

ውይይት የተጀመረበት ሰዓት_____ ያበቃበት ሰዓት _____የወሰደው ጊዜ በሰዓት(በደቂቃ)_____

ተሳታፊዎች: 1-ካሁን በፊት ወልደው የሚያውቁ እና በቀበሌያቸው የጤና ልማት ሰራዊት አባል የሆኑ እርጉዝ እናቶች እና 2- በቀበሌው የሚገኙ የባህል ህክምና ሰጪ እናቶች

የውይይት መለያ ቁጥር_____

ቀበሌ_____

1. ያለ ሀኪም ትዕዛዝ መድሀኒት ስለመውሰድ ያለዎት አመለካከት ምን ይመስላል?

2. ያለ ሀኪም ትዕዛዝ መድሀኒት ለመውሰድ አጋላጭ ሁኔታዎች ምንድናቸው ይላሉ?

3. በእርግዝና ጊዜ ያለ ሀኪም ትዕዛዝ መድሀኒት መውሰድ የሚያስከትለው ችግር ምንድነው ብለው ያስባሉ ?

4. ያለ ሀኪም ትዕዛዝ መድሀኒት የመውሰድ ጥቅም ከሚያስከትለው ጉዳት አንጻር ምን ይመስላል?

5. በእርግዝና ጊዜ ያለ ሀኪም ትዕዛዝ ለመድሀኒትነት የሚውሉ ዋና ዋና የባህልና /የዘመናዊ ህክምና መድሃኒቶች ምንድናቸው ብለው ያስባሉ?

6. በናንተ ማህበረሰብ, ባሎች እርጉዝ ሚስቶቻቸውን ያለ ሀኪም ትዕዛዝ መድሀኒት እንዳይወስዱ ይክልክላሉን? ለምን? እኛስ እርጉዝ እናቶች ያለ ሀኪም ትዕዛዝ መድሀኒት እንዳይወስዱ እንዴት መከላከል እንችላለን ብለው ያስባሉ?