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BAHIR DAR UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF NUTRITION AND DIETETICS

HOME REMEDY PRACTICE AMONG HYPERTENSION PATIENTS IN BAHIRDAR CITY, NORTHWEST ETHIOPIA, 2024: A QUALITATIVE STUDY

By Zenebech Dagnew (BSc)

A THESIS REPORT SUBMITTED TO THE DEPARTMENT OF NUTRITION AND DIETETICS SCHOOL OF PUBLIC HEALTH COLLEGE OF MEDICINE AND HEALTH SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR A DEGREE OF MASTERS OF PUBLIC HEALTH IN PUBLC HEALTH NUTRITION.

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Bahir Dar, Ethiopia

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COLLEGE OF MEDICINE AND HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTHPUBLIC NUTRITION & DIETETICS

ADVISOR'S APPROVAL FORM

CERTIFIES OF THESIS

The undersign examining committee certifies that the thesis prepared by Zenebech Dagnew Asaye , entitled: HOME REMEDY PRACTICES AMONG HYPERTENSION PATIENTS IN BAHIRDAR CITY, NORTHWEST ETHIOPIA, 2024: A QUALITATIVE STUDY Submitted to Bahir Dar University College Of Medicine and Health Sciences School of Public Health Department Of Public nutrition in partial fulfillment of the requirements for the Degree of **MASTER OF SCIENCE IN PUBLIC NUTRITION & DIETETICS** complies with the regulations of the University and meets accepted standards with respect to originality and quality. Zenebech Dagnew prepared this thesis under my guidance.

Investigator name:

Zenebech Dagnew ZDAYE

1. Nestanet Fentahun 06/01/2017

Advisor's name Signature Date

EXAMINER'S APPROVAL FORM

BAHIR DAR UNIVERSITY

College of Medicine and Health Sciences

School of Public Health

Department of Nutrition and Dietetics

Approval of thesis for defense result

We here by certify that we have examined this dissertation/thesis entitled "Home Remedy Practices among Hypertension patients at Bahir Dar city hospitals" by Zenebech Dagnew". We recommend and approve the thesis report for a degree of "Masters of public health in Nutrition".

Board of Examiners

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Full TITLE	HOME REMEDY PRACTICES AMONG HYPERTENSION PATIENTS IN BAHIRDAR CITY, NORTHWEST ETHIOPIA, 2024: A QUALITATIVE STUDY
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STUDY AREA	BAHIR DAR
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LIST OF ABBREVIATION AND ACRONYM

BP……. Blood Pressure

CVD…….....Cardio Vascular Disease

DBP…….....Diastolic Blood Pressure

HTN…….....Hypertension

IRB ……. Institutional Review Board

NCD ……. Non-Communicable Diseuse

SBP……. Systolic Blood Pressure

WHO…… World Health Organization

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Abstract

Background: Hypertension, also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure. Hypertension is considered one of the most challenging public health problems worldwide. Home remedies are commonly used to treat hypertension using traditional medicines in Ethiopia. These remedies are often based on traditional beliefs and practices. To the best of my knowledge there is limited research on use, types and perspectives of home remedies used to treat hypertension.

Objective: The study was aimed to explore home remedy practices among hypertensive patients who live in Bahir Dar city, northwest Ethiopia, 2024.

Method: This study was conducted in Bahir Dar City public and private hospitals in Amhara regional state of Northwest Ethiopia from May to June 2024. The methods followed exploratory research design method which involves qualitative data collection techniques such as in- depth interviews, focus group discussions and projective techniques. Data were collected using 11 in-depth interview, focused group discussion with 5 hypertension patients, and 4 Key informant interviews. Each interview was audio-recorded, transcribed verbatim and translated to English. Thematic analysis was performed. Study participants were those people who were on hypertensive patients and were following at least for one year and are currently on hypertension treatment in public hospitals in the city during the data collection period. All study participants were ≥18 years of age selected purposively. The data was analyzed with Atlas Ti version 7 software.

Result: In this study three main themes such as traditional herbal medicine, healthy lifestyle practice and patients' experience and perspectives were developed from eight sub-themes. The traditional herbal medicine theme had three sub-themes (types of home remedies used, source of information on home remedies, challenges and side effects). Healthy lifestyle practice had two subthemes (healthy dietary eating habit, physical exercise), and patients' experience and perspectives had three subthemes (perceived beliefs on efficacy of home remedies, perceptions on the safety of home remedies, perceived recommendations). Most of the participants used

garlic, red onion, moringa tea, Ginger, banana, bean, Lemon, Damascus leaves; Steep as home-prepared remedies treatment option for hypertension. All these remedies were prepared and taken as tea, with food or by diluting with water in empty stomach. The participants get information about home remedies from the internet, reading books, asked other patient experiences. The majority of them attempted to engage in planned physical activity to avoid weight gain. Patients also felt that since traditional made home remedies are unproven, they should only be used in combination with prescription drugs.

Conclusion: The participants used different types of home-prepared remedies as a treatment option for hypertension. The types used by patients are moringa tea, ginger, lemon, garlic, red onion, green tea, Rumex abyssinicus, flaxseed, banana, bean, coriander, nettles, turmeric, Bitter leaf juice, black cumin tea, and Ruta chalepensis, white lupin, damascus leaves, dill, Garden Cress, and Calpurnia Aurea. Therefore, to prevent misunderstandings, health care practitioners and other stakeholders should provide accurate information on the proper dietary habit, causes and treatment options for hypertension patients by using different health communication methods. Researchers shall conduct clinical trials about home remedies used for treating HTP for their efficacy, side effects, dose, preparation, and frequency related issues.

Key words: Home remedies, Hypertension, Ethiopia

1. INTRODUCTION

1.1 Background

Hypertension, also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure(1). Hypertension is one chronic non-communicable disease that has a significant impact on global health because of its high prevalence and the long-term complications it causes with kidney, heart, and stroke. It ranks as the third most important avoidable risk factor for disability and early mortality worldwide. High blood pressure is classified as primary hypertension or secondary hypertension. Normal blood pressure is systolic less than 120 and diastolic less than 80. Elevated blood pressure is systolic 120 to 129 and diastolic less than 80. High blood pressure stage 1 is systolic 130 to 139 or diastolic 80 to 89. High blood pressure stage 2 is systolic 140 or greater or diastolic 90 or greater (101).

About 90–95% of cases are primary due to lifestyle and genetic factors(2-4). Lifestyle factors that increase the risk include excess salt in the diet, excess body weight, smoking, and alcohol use. The remaining 5–10% of cases are secondary cases due to chronic kidney disease, narrowing of the kidney arteries, an endocrine disorder, or the use of birth control pills(5-7).

Hypertension can be adequately managed through drug treatment as well as lifestyle changes. Nowadays, treatment of hypertension starts with non-medicinal treatments such as lifestyle modification. The interventions used in this regard have favorable effect on blood pressure and are recommended as a complementary therapy for hypertension prevention and treatment (8-10).In Ethiopia, the burden of hypertension is substantial, with estimates suggesting a prevalence of over 20% among adults. The condition poses a significant challenge to the healthcare system, as hypertension often goes undiagnosed and undertreated, leading to poor health outcomes(11). Given the limited access to healthcare facilities, financial constraints, and cultural beliefs surrounding illness causation and treatment, many individuals in Ethiopia turn to home remedies as an alternative means of managing their hypertension(12). Home remedies are commonly used to treat hypertension in Ethiopia. These remedies are often based on traditional beliefs and practices(13) .

The widely accepted prevalence of traditional medicine (TM) in Ethiopia was about 80 %, of which 95 % were coming from plants. Home remedies have long been used in Ethiopia as a primary or complementary approach to healthcare. These remedies often involve the use of medicinal herbs, dietary modifications, and lifestyle practices. They are deeply rooted in cultural beliefs and traditions, passed down through generations(14, 15). While home remedies may offer certain advantages such as affordability, accessibility, and familiarity, their efficacy, safety, and potential interactions with conventional medications remain areas of concern(16).

The cultural context and beliefs surrounding illness and treatment play a significant role in shaping the preference for home remedies in Ethiopia. Traditional healers and community elders often hold valuable knowledge and are sought after for their expertise(17). There is limited research on use, types, perspectives, and standardized guidelines exist regarding the use of home remedies for hypertension management. The social, cultural, and economic factors that influence the utilization of home remedies is crucial for developing comprehensive and contextually appropriate interventions that address the unique healthcare needs of individuals with hypertension in Ethiopia(18-20).

The use of home remedies by Ethiopians with hypertension highlights the importance of cultural norms, restricted access to medical care, and financial limitations in influencing this preference.(21).Understanding the cultural context and beliefs surrounding home remedy practices can inform the development of culturally appropriate interventions for hypertension management in Ethiopia(22, 23). By examining the types, perspectives and use of home remedy practice, this study aims to contribute to the knowledge base and provide a foundation for evidence-based hypertension management strategies that integrate both traditional and modern approaches (24-26).

1.2 Statement of problem

Using home remedies to manage hypertension is a popular practice worldwide. Many individuals utilize home remedies to assist in controlling their blood pressure, even though it's crucial to follow medical advice and adhere to treatment programs prescribed by healthcare professionals patients use remedies at home and lifestyle modifications to manage hypertension. Many cultures emphasize reducing salt intake. For instance, the Mediterranean diet, popular in countries like Greece and Italy, is known for its low sodium and high potassium content (27). Foods high in potassium, such as bananas, oranges, and sweet potatoes, are recommended worldwide. In India and Southeast Asia, bananas and potatoes are common dietary staples (28, 29). In Japan, walking and cycling are popular, while in Latin America, dance and active sports are common(30, 31). Garlic is used in many cultures for its potential blood pressure-lowering effects. In traditional Chinese medicine and Ayurvedic practices, garlic is valued for its health benefits (32). Green tea is consumed worldwide, especially in East Asia(33). Hibiscus Tea popular in parts of Africa and Latin America, has been associated with blood pressure reduction in some studies (34, 35).

The reliance on home remedies for hypertension management raises concerns regarding the types used, dose, healing potential and interactions with conventional medications (28). Home remedies are often based on cultural beliefs, traditional knowledge, and personal experiences. Moreover, exploring the factors influencing home remedy practice among individuals with hypertension is crucial to address the barriers and facilitators to seeking and adhering to conventional medical treatments. Individual factors, economic barriers, stress, non-adherence to medications due to the use of traditional remedies, and difficulties and misconceptions about following physical activity guidelines were mentioned as barriers to hypertension management (29-31).

Limited access to healthcare facilities, financial constraints, cultural beliefs, and lack of awareness about the importance of evidence-based treatments may contribute to the preference for home remedies (32). Though, the prevalence of hypertension and its associated risks globally, there is limited research specifically focusing on the practice of home remedies among individuals with hypertension. The use of home remedies for hypertension management may have significant implications for its treatment and overall health outcomes(12, 36).

Despite the availability of modern medical treatments, many individuals with hypertension turn to home remedies as an alternative or complementary approach to manage their condition(37) . Study conducted in Indonesia revealed that to treat their hypertension, these rural villagers used traditional medicines more often than anti-hypertensive medications. The same study also reported that the perception that the use of traditional medicines only is sufficient to control blood pressure and may provide patients a greater sense of control over their healthcare decisions. Health professionals in rural areas should be aware of how the use of traditional medicine might affect hypertension management (38-40)

Additionally, the types of home remedy practice on hypertension management outcomes needs to be assessed. While some individuals may experience positive effects and improved blood pressure control through the use of home remedies, others may face adverse events or suboptimal management. Understanding the potential risks and benefits associated with home remedy use is essential to guide healthcare providers in providing appropriate counseling and education to individuals with hypertension (41, 42). Addressing the practice of home remedies for hypertensive management requires a comprehensive understanding of the socio-cultural, economic, and healthcare system-related factors that influence individuals' choices and beliefs(40, 43).

Research has found a variety of alternative therapies to be successful in reducing high blood pressure including diet, exercise, stress, management, supplements, and herbs. Every year, more and more studies are being performed on herbal remedies for high blood pressure(44, 45). Home remedies are perceived as accessible, affordable, and culturally acceptable means of managing hypertension. However, to the best of my knowledge, there is limited understanding of the experiences associated with these practices among hypertensive individuals in Ethiopia. This qualitative study aimed to explore the home remedy practices of individuals with hypertension in Bahir Dar city hospitals and gain insights into their experiences and perspectives of individuals regarding these practices.

1.3 Significance of the study

The finding of this study is important in providing an in-depth understanding of the experiences of individuals with hypertension and their perspectives on home remedy practices in Bahir Dar city hospitals, Ethiopia. By exploring the experiences associated with homemade remedy practices, healthcare providers can develop culturally sensitive interventions and policies to improve hypertension management.

The study will provide information for policy makers to understanding the motivations, beliefs, and challenges related to home remedy practices and develop policy to bridge the gap between biomedical and traditional healthcare systems and promote patient-centered care. This study will also help in providing information on home remedies among hypertension patients for regional bureau, zonal health office, hospitals, health centers and health post to develop better intervention on home remedy practice and related factors and as a source of information to researchers and planners for the secondary source data.

2. LITERATURE REVIEW

2.1 Traditional medicines as home remedies

Non-pharmacological interventions for the treatment of hypertension in primary care with proven effectiveness(46). For instance, a study by Wong et al. (2019) conducted in a multicultural community in Australia found that cultural beliefs and personal experiences influenced the use of home remedies among individuals with hypertension from diverse ethnic backgrounds(47). The study revealed that cultural beliefs and traditional practices played a significant role in the preference for home remedies. Participants reported using various remedies, including herbal preparations, dietary modifications, and physical activities. The findings highlighted the need to understand the cultural context and beliefs surrounding home remedy practices to develop effective interventions for hypertension management (48, 49). The studies revealed that the use of traditional medicines used in the form of home remedies as self-care practices among individuals with hypertension in Ethiopia. A qualitative study explored the factors influencing the adoption of home remedies using traditional medicine for hypertension management (50, 51).

Another similar study explored the experiences and perceptions of individuals with hypertension who used traditional medicines as home remedies in the Amhara region of Ethiopia. The study revealed that limited access to healthcare facilities and financial constraints were key factors driving the reliance on home remedies (37, 52). Participants reported positive experiences with certain remedies, such as garlic, ginger, and honey, which were believed to have beneficial effects on blood pressure. However, concerns were also expressed regarding the lack of scientific evidence and potential risks associated with self-medication using home remedies(53-55). In rural areas of Ethiopia found that participants attributed the origins of hypertension to supernatural causes, leading them to seek traditional remedies as a means of spiritual healing. It was found that 70% of participants with hypertension reported using home remedies as their primary form of treatment Similarly, a study in urban areas of Ethiopia reported a high prevalence of home remedy use, with participants citing cultural norms, cost-effectiveness, and beliefs in the natural healing properties of herbs as reasons for their choice (37, 56).

2.2. Types of home remedy practices employed by hypertensive patients.

Home remedies are described as foods, herbs, and other household products used to manage chronic conditions. Study conducted to examine home remedy (HR) use among blacks with hypertension and to determine if home remedy use is correlated with blood pressure and medication adherence shows the significances of the types and use of hoe remedy practices(57-59) . Home remedies are the alternative practice of using household items such as onions, garlic, and herbs to treat, mitigate, or manage a health condition. Home remedies have traditionally been used for self-care and condition management, particularly in underserved communities, in response to inequitable care and due to mistrust in health care providers and the health care system (60-62)

Dietary supplements have become the focus of debate among suppliers, the health care community, government regulatory agencies, and the public(63). Dietary ingredients include vitamins, minerals, herbs or other botanicals, amino acids, and substances such as enzymes, organ tissues, glandular, and metabolites. Supplements May also be extracts or concentrates of those substances because dietary supplements are easily accessible and because of the frequent misinterpretation that all natural products are also safe, patients May choose these agents for blood pressure control. Self- treatment with dietary supplements without the supervision of a health care provider may be very dangerous (64-66). For example, patients often utilize garlic in the treatment of hypertension, and garlic is known to interact with numerous medications. Self-treatment with dietary supplements continues to increase in popularity, health care providers must be responsible for educating patients about the efficacy, or lack of efficacy, of these agents (67-69) .

2.3. Experiences and perspectives of individuals in using home remedy practices for hypertension.

The community believed that homemade remedies have been used for the management of common mild conditions such as headache, diarrhea, and common cold as well as in the treatment of chronic diseases including hypertension. Attitude and practices toward HR are crucial elements of hypertension control and its favorable outcome expectation(54, 70). In

developing countries, the prevalence of homemade remedies used to help meet primary healthcare needs ranged from 60% to 90%, while in developed countries such as the United States and Australia, the population who have used homemade remedies at least once ranged from 40% to 50%(71, 72). Studies revealed that many participants purposefully stopped modern medicine and used herbal medicine without first seeing their doctor. they perceived that symptoms decreased or they were not under stress, participants frequently believed that their blood pressure improved and that they did not require treatment(73, 74). The study also reported that the perception that the use of traditional medicines only is sufficient to control blood pressure and may provide patients a greater sense of control over their healthcare decisions(75).

2.4 Implications of home remedy practices on hypertension management

Patients with hypertension perform diverse self-care activities that incorporate medication adherence and lifestyle modification, such as no smoking or alcohol, weight reduction, a low-salt diet, increased physical activity, increased self-monitoring, and stress reduction, for effective management at home(76). The self-care and home management of hypertension, like other chronic diseases, involve various behavioral changes that require optimal and effective medication adherence, self-efficacy, and prevention of complications(77). Health care professionals typically advise patients against the use of home remedies as a treatment for hypertension, as the effectiveness of home remedies on reducing blood pressure has been demonstrated in few studies(78, 79).

The majority of the studies examining home remedy use in the United States have focused on their use for managing a chronic condition; few studies have examined the impact of home remedy use on health behaviors(80) According to the study, 28% of Black participants and 15% of White participants acknowledged using home remedies, and those who did so reported less trust in doctors than those who did not(81). The recent study discussed that 37.8% of hypertension patients reported using one or more types of HR during their treatment. It was reported that there were significant regional variations, with the highest use reported in North America (62.5%) and the lowest in Europe (15.7%). These regional differences may be attributed to various factors, including geographical characteristics, social and cultural influences, sociodemographic characteristics of study participants, and the quality of conventional therapy(82, 83).

3. OBJECTIVES

3.1. General objective

- To explore the home remedy practices among individuals with hypertension and understand the experiences associated with these practices in Bahir Dar City, Northwest Ethiopia, 2024.

3.2. Specific objectives

- To explore types of home remedy practices employed by individuals with hypertension in Bahir Dar City
- To explore perspectives of individuals regarding home remedy practices for hypertension in Bahir Dar City,

4. METHODS

4.1 Study design, area and period

Institution based qualitative exploratory study was conducted to explore home remedy practice among hypertension patients in selected Bahir Dar city hospitals, Northwest Ethiopia: Bahir Dar is situated on the southern shore of Lake Tana, the source of the Blue Nile (locally called Abay). The city is located approximately 578 km (360 miles) north-northwest of Addis Ababa and has an elevation of 1840 meters (6036 feet) above sea level. The study was conducted in Bahir Dar city Amhara region which is found in Northwest Ethiopia from May 1 to June 1/2024.

4.2 Study population and sampling Procedure

4.2. 1 Source population.

The source population for this qualitative study comprised all individuals with hypertensive patients aged ≥ 18 years old, and those people who are on hypertension follow up at least for one year and currently on hypertension follow up in selected hospitals in Bahir Dar City during data collection period. Purposive sampling technique was used to select study participants of hypertensive patients in each selected hospital.

4.2.2 Inclusion and exclusion criteria

4.2.3. Inclusion criteria

- ✓ Participants were aged ≥ 18 years old and have a confirmed diagnosis of hypertension by a healthcare professional, residing in Bahir Dar City, Ethiopia, at the time of the study and expressed their willingness to take part in the study voluntarily.

4.2.4. Exclusion criteria

- ✓ Individuals with severe cognitive impairments that may hinder their ability to provide reliable information or cannot participate in interviews effectively, and seriously ill participants who are unable to communicate and give full information at the time of data collection were excluded.

4.3. Data collection tool and procedure

The data was collected through In-depth interview, key informant interview, and focus group discussion by experienced health professionals. IDI, KII, and FGD guides were developed through reviewing different related literatures. Each interview was audiotaped using digital voice recorder. The English version was semi-structured, open-ended question and were translated into Amharic and again translated back to English. The length of the interview was guided by the process of information saturation, when the narratives became repetitive, and no new data is revealed.

4.4 Data quality control

To maintain the credibility of the research findings, the study participants were communicated persistently at the time of the interview. Peer-debriefing was done for the questioner and transcripts was given to my colleagues. Member checking was conducted by returning the preliminary findings to some participants to correct errors and challenge what they perceive as wrong interpretations. Dependability was attained through accurate documentation by minimizing spelling errors through frequently checking the data and including all documents in the final report. The details of the procedures was described to allow the readers to see the basis upon which conclusions were made.

To achieve confirmability of the study findings: interview and records collected from the study hospitals. To maintain the transferability of the finding, appropriate probes were used to obtain detailed information on responses, and study participants were selected based on their specific purpose to answer study questions and to get greater in-depth findings.

4.5 Data processing and analysis

After data collection, the investigators transcribed the audio-record data into Amharic, local language, translated into English, and then read and re-read the several times to code the data, to detect emerging themes and sub-themes. The translated document was analyzed by use of Atlas ti 7, coded line-by-line and grouped into themes based on the concepts they contain. Then each response codes were categorized under each sub-theme and theme. An interpretation of the qualitative data was dependent upon patients' descriptions of their practices and perceptions that the researchers check against the verbatim transcripts for accuracy and consistency. Then finally 45 categories were extracted from 195 codes by combination similar meaning, 8 sub-themes 3

themes were identifying, and thematic approach was used which could emphasize identifying, analyzing, and interpreting patterns of meaning.

4.6. ETHICAL CONSIDERATION

Ethical clearance letters were obtained from Bahir Dar University Ethics Review Committee and the study also conducted following the informed consent from participants. A letter of support was also obtained from Amhara Public Health Institution and so permission to conduct the study was obtained from Bahir Dar City administration prior to data collection. Data collectors clearly explained for objective of the study to participants before conducting the interview and oral informed consent will be obtained. The names of the participants were not mentioned . Confidentiality was maintained by keeping the data collection forms locked properly and the electronic data file kept securely in a password-protected computer.

4.7 DISSEMINATION OF RESULT

The Findings of the study expected to be presented and submitted to Bahir Dar University School of Public Health department of public Human nutrition and will be communicated to all concerned bodies.

5. RESULTS

5.1 Socio-demographic information of the participants

In this study a total of eleven (11) in-depth interviews were conducted. From 11 participants some of them were retired civil servants, merchants and farmers. Most of they had formal education. The age of study participants ranged from 35-77 years. The key informant interview includes 3 health care providers who are medical doctors and work in hypertension department of the hospitals and one traditional medicine provider at community level. We also conducted focus group discussion with 5 hypertensive patients.

Table 1: Sociodemographic information on home remedy practices among hypertensive patients in Bahirdar city, northwest Ethiopia

Characteristics		Frequency
Age	18-50 years	3
	51years and above	8
Educational status	Un educated	1
	Degree and above	3
	Diploma	4
	Primary education to high school	3
Marital status	Married	10
	Divorced	1
Duration with hypertension	Less than 5 years	2
	6 years and above	9
Occupation status	Farmer	1
	Civil servant	3
	Pension	4
	Private wok	3

5.2. Thematic findings

The findings that emerged from the analysis of the in-depth interview, KII, FGD were arranged as themes, sub-themes and categories. Data analysis has revealed 195 codes, 45 categories ,8 subthemes and 3 major themes as stated in table 2.

Table 2: Summary of themes and subthemes related to home remedy practices among hypertension patients in Bahir Dar city, northwest Ethiopia, 2024

Themes	**Codes**
Use of traditional herbal medicine	❖ **Types of home remedies used** • Vegetables

Table 2: Summary of themes and subthemes related to home remedy practices among hypertension patients in Bahir Dar city, northwest Ethiopia, 2024

Themes	Codes
as home remedies	• Fruits • Grains • Animal sources • Preparation methods • Time of intake ❖ **Source of information on home remedies** ✓ Internet ✓ Other hypertensive patients ✓ Radio ✓ Television ✓ Reading books ✓ Asking elders ✓ Families ✓ Traditional healers ❖ **Challenges and side effects** • unknown, Frequency, Dose and Duration • Fear of side effects • Liver damage • Kidney disease • Fear of other chronic disease • Not see any change • Not researched • Lack of knowledge on its preparation • Not easily accessible
Healthy life style practice	❖ **Healthy dietary eating habit** • Eating fruits • Vegetables • grains • Avoiding alcohol • Reduce fatty foods • Reduce salt intake • Take rest • Avoid stress ❖ **Physical exercise** ✓ Have regular exercise ✓ Have walking ✓ Doing works hard ✓ Playing sport
Patients' experience and	❖ **Perceived beliefs on efficacy of home remedies**

Table 2: Summary of themes and subthemes related to home remedy practices among hypertension patients in Bahir Dar city, northwest Ethiopia, 2024

Themes	Codes
perspectives to home remedy practice	➢ Reduced blood pressure ➢ Reduce weight ❖ **Perceptions on the safety of home remedies** ○ Remedies are safe ○ Improved health status ❖ **Perceived recommendations** ✓ Taking healthy dietary habit change ✓ Doing regular physical exercise ✓ Doing clinical researches dose, frequency and duration, and possible side effects of home remedy ✓ Needs collaborations of medical and traditional home remedy experts ✓ Strating modern medication

5.2.1 Theme 1: Use of traditional herbal medicine as home remedy

This theme has three subthemes, which are types of herbal home remedies used by patients, source of information, challenges and Sid effects.

5.2.1.1 Subtheme1: Types of herbal home remedies used by patients

The majority of study participants stated that they have treated hypertension with home-prepared herbal plants. Patients have used Garlic, red onion, green tea, Ginger, Moringa, banana, bean, Lemon, dill, Rumex abyssinicus, white lupin, black cumin, turmeric, flaxseed, coriander, Bitter leaf juice, Dill, black cumin tea, Ruta chalepensis tea, brewing tea, praying and drinking holy water, nettles, damascus leaves, and steeped tea to treat their hypertension. Patients discussed that they used home remedies with empty stomach every day and with food. The following participants stated the same thing as:

"I have used banana, bean, moringa tea, Ginger, and other vegetables, which are very effective. I take one lemon a day. Lemon is a very versatile medicine and helps with pressure. It also has vitamin C. Herbs like these are also important. It is good for pressure. Ginger is herb that I use a

*lot. Now it is crushed and made into tea. It is used as a food flavoring**". (70 years old, male, IDI)***

"I used to consume great medical herbs like flaxseed and coriander, but I stopped taking flaxseed since it makes me gain weight. Bitter leaf juice, Rumex abyssinicus, black cumin tea, and Ruta chalepensis tea are all important herbal therapies for conditions like hypertension. It is recommended to boil all these teas and drink them first thing in the morning on an empty stomach". ***(43-year- female, IDI)***

Another study participant health care provider supported this idea that hypertension patients take home made treatments as option of to get relief from the disease. The following key informant health care provider discussed as,

"Indeed, a lot of people tell us they can utilize items like moringa tea, but finding out who has used what and profited from it will take independent research. A study similar to the one you are working on is required. By itself, pressure can lead to consequences such as eye damage, stroke, brain clots, bleeding from the head, heart failure, renal failure, nerve discomfort, etc. The brief period is one week, two weeks, and three days, with the goal of having them arrive in three months. Some folks require an appointment". ***(Medical doctor, KII)***

The study participated discussed that they used these remedies as tea, with food or by diluting with water in empty stomach. It was supported by the following participants stated as,

"I've used moringa and dill. It is equivalent to one tea leaf in quantity. It has to do with how many teas leaves you use. The amount is the same no matter how much you use. This is in a tea cup for when you want to utilize it. It cannot be used independently. Two cups of tea at most. I used it that way, and it works well. Another herbal remedy I've tried and used is dill. If you've become accustomed to using it, you can brew it dry with tea. It can also be used to add a squeeze to the fritters that you eat, which is how I've tried it. The size of the dill leaf is the same as that of a tea leaf when you use it, so you can add a little bit there when you want to use it. As for the teacup, you shouldn't stray from it. I used a maximum of two glasses of tea". ***(45 years old, female, IDI).***

5.2.1.2 Subtheme 2: Source of information on home remedies

Most of the participants reported that they have first tried traditional homemade remedies before consulting medical professional to start modern hypertension treatment. The patients reported that they try to get information by reading and asking knowledgeable people. The following participants stated the same thing as:

"Some people advise me against using modern medicine because they think it would kill me. Then I decide not to take any medication for three days, latter I take modern medication after taking traditional home treatments, and thus far, my blood pressure has dropped" .... ***(64 years old male patient, IDI).***

Another patient also expressed it as *"I got it from the internet and asking from other hypertensive patient experience read books about home remedy plants. Now I always think that even if the medicine is not effective, I always try to take these extra traditional blood pressure medicines. I read different books, I buy them, I go to different bookstores****". (62 years old male).***

The patients learned that our fathers had taught them about traditional herbal remedies, and there are books outlining the different herbs and vegetables that have been utilized for medical purposes and have recommended that the government pay for research on herbal therapies. The study participants describe as the following,

"I acquired knowledge from our fathers, and books exist which explain the various plants and vegetables that have been used as medicine. They have a great deal of experience and expertise with herbal traditional treatments, but I have suggested that the government fund studies on herbal remedies. Forests ought to be preserved as well." ***(54 years old patient, IDI)***

Another study participants explored that information was obtained from patients used before and get relief. this was supported by the following participant as:

*"I was told by those who had used it previously to try traditional herbal plants before starting modern medication. However, I didn't notice any difference after trying them, so I stopped to prevent getting into more issues and starting modern medication****". (45 years, female, IDI)***

"My son has informed me that drinking warm water is beneficial. My fat melts when I sip warm water. I accept it since there is less fat. For instance, I read on the Internet about the

*significance of moringa. It is situated in the community's neighborhood**". (77 years old Patient, IDI)***

5.2.1.3 Challenges and side-effects

The fact that some participants began taking herbal medications without first seeing a doctor was also mentioned. After experiencing side effects and not seeing any improvement in their blood pressure, several study participants stopped taking the medicine, went back to their regular medication, and began following up. **70 years old IDI participant mentioned his experience as:**

"There is a challenge in getting the needed home remedy and also lack of knowledge about the doses make got me gastric disease and also weight loss. Lack of full information about its preparation, and also not tested by experts to take hopefully".

64 years old participant stated as,

"For the first time I have tried a vegetable called in Rumex abyssinicus, I boiled, crushed and drank a teaspoon of it surprising the blood pressure decreased, but it causes gastric ulcer and afraid of getting others disease, I stopped that and started crushed 3 garlic and poured them into a glass. I do the same thing in the morning and drink it when I wake up. Now you are surprised that my weight decreased from 68 kg to 59. Well, this garlic is very hard on the body, and it will make me lose weight, and, lose my resistance, so I had stop it, and consulted a doctor who advise me to take modern medicine then I have started it then and now".

Others who took herbal medicines talked about how using them could have negative effects and lead to additional health issues, so they stopped using them. Patients also mentioned that they could not easily obtain or use herbal remedies when they needed them, particularly when their blood pressure was elevated. They don't know how to prepare it or where to store it, in addition to not understanding what amounts to take. **43 years old, IDI respondent explained as:**

"I have used Moringa, I bought it from a market that sells packaged tea leaves. I boiled it and used it in the form of tea. then has the same bitter taste when you do the test, so I used it for a week or two. After that, the pressure increased, and the headache increased until my eyes fell out. When the blood pressure rises, it hurts my eyes."

"There is a challenge in getting the needed home remedy and also lack of knowledge about the doses make got me gastric disease and also weight loss. The green tea and Rumex abyssinicus are not accessible for me. As soon as I ate that, I stopped the tea because it hurt me, and the garlic made me lose weight and exposed me to other problems. The other main thing is that I cannot get the needed home remedy as I want, it is not accessible for me". **(64 years old male patient, IDI)**

The participants also discussed that they have no knowledge on the amount, inaccessibility of remedies, and always fear of side effects and future complications.

"I declined to use the at-home remedy, and as soon as my heart rate begins to increase, I will go to the treatment. It is assumed that when the benefits and drawbacks are balanced, a better outcome will result. I have used moringa tea since I was diagnosed at the first time, with tea and also in foods, but later the teste is not good for me, but there is no change on my blood pressure and moringa is not accessible at market aera to me in buying it". ***(45 years old female, KII)***

"Yes, in addition to the modern meditation prescribed by medical professionals, I used moringa, coriander leaves, and bitter leaves. I occasionally take it since I'm worried about potential side effects and I'm not sure how much to take, but it did help with my hypertension". ***(67 years old participant).***

5.2.2 Theme 2: Healthy lifestyle practice

In this study, patients with hypertension explored how they tried to implement healthy eating habits including lowering their intake of salt, avoiding fatty meat, exercising to prevent weight gain, eating more vegetables, going to appointments on time, and taking their prescribed medication. This theme has two subthemes.

5.2.2.1 Subtheme1: Healthy dietary eating habit

It was stated that preparing and consuming acceptable foods at home is indicated for people with hypertension. Patients believe that if people prepare and eat these foods instead of the forbidden items, they may be able to prevent hypertension and its complications quite successfully. It was discussed that they stopped taking things like alcohol and salt right away, to start. In order to

modify the nutritional status, began cooking and consuming these approved items at home, such as grains, flax, onions, and fruits.

"I will keep taking the medication that my physicians have given, and I won't eat or drink anything that isn't necessary even if it involves avoiding alcohol and salty food during social events. My eating patterns have changed, and I've made an effort to eat a variety of foods like vegetables at breakfast, lunch, dinner, and snacks. I used to be a huge potato fan. I make an effort to maintain hygiene and consume all foods that are essential for lowering blood pressure". ***(51 years old female Patient).***

The participants talked about the necessity for scientific measurement of dietary habits in order to determine the right nutrients and dietary practices for effective prevention of non-communicable diseases like hypertension. The participants disclosed that they needed to embrace healthy eating habits, adhere to nutritionists' advice, and decrease back on their intake of alcohol and salt. They have been carefully preparing and consuming these approved foods at home, and they make sure to take breaks from eating to get adequate rest.

"I consumed a little too much alcohol, somewhat deviated from my diet, and drank everything especially the drinks that accompanied the meals. I didn't really look into it, but I wasn't in good enough physical form; I was 92 pounds when the stroke happened, and I'm now 82 or 83 pounds. I don't see him often since at home they throw everything at me. I wasn't living a healthy lifestyle since I was binge drinking, eating higher-fat meats, working purely by sitting and eating meals high in salt". ***(age 63 years old participant)***

The study patients reported reduced alcohol drinking, and salt consumption. Began to use extreme caution when preparing and eating these permitted foods at home. Since then, their blood pressure has dropped.

I have been quite cautious when taking, cooking, and consuming these allowed goods at home. I make my own food now. I cook at home and merely need bread. After that, I stopped doing what is known as "just hate." Secondly, as of September 1, 2015, I stopped drinking beer and draft, including whisky, and I only occasionally added salt. ***(62 male patient, IDI)***

The participants reported that changing one's diet is also required when taking remedies made from herbs. patients started carefully preparing and eating these permitted foods at home. Searching knowledge and have the information on each diet and have taken now a low-salted food.

54years old patients, explained as: *"I no longer use salt in my coffee, and I only drink one liter of water but not one and a half liters before meals. I also drink healthy coffee in the morning. I don't overindulge in water after eating, and instead of adding anything sweet, I utilize bitter foods".*

Patients discussed that before the diagnosis of hypertension they had unhealth eating and drinking habit but after that they have change their dietary habit**. *54 years, woman explained as*:** "*Before I experienced a seizure, I used to enjoy alcoholic beverages. Now that I'm using sorghum and chickpeas, it increases. Consequently, when I use grains, it decreases when I use rice and chickpeas made from grains".*

"Following my diagnosis and guidance from medical professionals, I changed my eating habits and stopped consuming fatty meals. I also avoided drinking alcohol and eating foods that were recommended for people with hypertension when attending social events". **(72 years old participant).**

5.2.2.2 Subtheme 2: Physical exercise

The study explored the participants ' knowledge of the benefits of regular exercise and weight loss. The majority of them attempted to engage in planned physical activity, and some participants claimed that their manual labor prevented blood pressure spikes and helped them avoid weight gain. This was described by the following study participants sated as:

"I get up in the morning at 11:00. It always has the same value. I do sports for half an hour, and after half an hour, 11, 30 is to make breakfast, eat and get up in the morning, it is worth doing physical activity, it is very valuable. Our body is created by the environment, but it must be trained by our efforts". ***(70 years old patient, IDI)***

Some participants explored as even if they don't have regular program to make exercise they had walk program for the sake of their improvement. **43 years old, IDI, patient explained as:**

"Even though I don't participate in activities such as sports, I walk from my house to the office every morning because it's far away.

"Other than making dietary adjustments, I don't follow any regular exercise schedule. I used to be a bicycle rider. It made me fat when I quit driving it. After the pressure, I believe that's when it happened. My current doctor and I had a conversation. Although I may not be exercising since I'm lazy, he advised me to. I make an effort to move far in the city on foot whenever I travel. I will not apply it going forward because I was advised that I should do this to reduce my body's weight". ***(43 years old male patient).***

5.2.3 Theme 3: Patients experience and perspectives to home remedies

The respondents talked about the importance of vegetables and plants as traditional home remedies to lower their blood pressure. The theme has three subthemes.

5.2.3.1 Subtheme 1: Perceived belief to efficacy of home remedies

It was reported that most of the study participants have used traditional home remedy treatments before the start of modern hypertensive medication by assuming they are effective if taken appropriately. These locally sourced medicines pass-across-generations transmitted medications proved efficacious. The community has made multiple efforts. The depth of information was not thoroughly investigated. Participants stated that sharing our fathers' wisdom was a commendable idea, society did not move forward as a result.

"My blood pressure dropped from 160 in 195 to 90 after I started taking traditional home remedies. Everyone advised me to use current medication because this was so difficult. I began taking it on August 2, 2009, and finished it in two and three months. I only stay for a maximum of four months; beyond that, I quit when it starts to rise somewhat. The traditional substance is now lowering my blood pressure, but scientific proof for it does not exist". ***(62 years old patient, IDI)***

"Yes, there is change, no matter what the dose is unknown, I realized that they have a very good value, because firstly, it reduced my weight 59 kg from 68 kg, and secondly, my blood pressure came down. It was amazing. It reduced my blood pressure. It came down from 160-90". ***(64 years patient).***

The study participant who has experience in providing herbal remedies discussed that these traditional therapies work well because these traditional treatments are effective since we follow up with a local clinic to find out more about their medical condition after giving the herbal treatment. They bring letters back stating that they are in better health.

"I will provide Garden Cress, Moringa, and Calpurnia Aurea instructions on how to take and apply within 7–14 days of use to see its efficacy, if they have previously been diagnosed and come to us with contemporary treatment. If there is progress, we cease it and suggest alternative preventative measures. Some people may wonder what the dosage is, however because humans have been using and testing it for 3000 years, rats have been employed in the testing of modern medicine. When taken in excess, the majority of home remedy herbal medications have no effect on humans". **(KII, Traditional home remedy provider)**

Another study 66 years old study participant described as:

"According to me, it is effective, traditional medicine experts should work together, share their experience, register, prepare books on the effectiveness, and complete preparation methods to pass to future generations if it is well-researched, well-known, and has no adverse effects. These steps should be taken by the government".

However, a different participant stated that their blood pressure remained unchanged after using home remedies. The patients explained that the choice to utilize traditional medicine resulted from the fact that, unlike modern treatments, which require long-term monitoring and don't change once started, traditional medicine can be stopped or continued as needed. However, they advise against using conventional medicine when there is no improvement in blood pressure as it would just exacerbate the situation; instead, consulting a doctor is always the best course of action.

"My decision to use traditional medicine stemmed from the fact that it is a treatment that can be stopped or continued as needed, whereas modern treatments need long-term monitoring and don't alter once started. but I did not see any change in my blood pressure, for this reason, I would advise against using traditional medicine because it will only make the condition worse, and seeking medical advice is always the best course of action". ***(45 years old patient, IDI)***

"No, change was observed, before I stopped modern medication and take traditional home remedies but there is no change on my blood pressure so I have stopped it. Now I took modern medication alone because I was told that it would decrease". ***(43 years old, participant, FGD).***

5.2.3.2 Subtheme 2: Perceptions on the safety of home remedies

It was mentioned that these locally sourced, passed generation-to-generation medicines are safe and work as intended. Despite the community's best efforts, the extent of information was not thoroughly investigated. Although it was a wonderful idea to attempt, society did not advance by disseminating the wisdom of our predecessors.

"These medicines were effective that came from the community and passed through generation. The community has tried a lot. but the level of knowledge was not well explored.in my view, it was good to try, but the society did not continue by sharing knowledge from our fathers". ***(70 years old participant, IDI)***

"Plants are involved most of the time, but animals also need to contribute. Sweet honey is the result of animal participation. Thus, both plants and animals are included. We give it to them for honey, and we can prepare it the way they know it if we cook it in butter and flavor it. We hand it over to them. What can we feed them when we use a machine to grind them? we offer them butter; it can be boiled both by itself and with sugar when we give them honey. So, it is correct". ***(traditional home remedy treatment provider, KII)***

Some participants investigated how to improve their level of hypertension by exercising, adhering to doctor's directions, and avoiding undesirable meals and drinks. It was suggested that everyone use prescription and natural medications at different times. *It was supported by the participants explored as: "As I've said to you already, there's nothing wrong with us because you're treating me like the government. Though our traditional medicine is safe, we don't know the dose. Our lack of knowledge on the dosage is the issue".* ***(43 years old Patient, IDI)***

5.2.3.3Subtheme 3: Perceived recommendations

The study explored the use of several herbal medications by individuals with hypertension; nevertheless, due to their non-evaluation by relevant organizations, their negative effects may exacerbate other chronic illnesses that are more complex. In addition to using herbal plants, people should adopt a healthy lifestyle and use preventative measures to increase their chances of

survival and enhance their quality of life. Traditional Professionals in the field have to scrutinized and validate it. They think it would be helpful if they looked at something comparable and explained that calculating the amount, assessing it, and conducting trials would confirm it.

*"I believe taking these modern pharmaceuticals has kept me well, I think that studies that are validated by new will bring about change. Therefore, further research is needed to better understand how to use herbal medications. The community and all hypertension patients should also exercise for at least thirty minutes each day and follow medical instructions. I have suggested that preventive actions must be continued before hypertension develops. If hypertension is recognized after that, medication must be used, along with good eating habits, stress management, and relaxation****". (36 years old FGD participant).***

The study participants discussed that from their experience they advise everyone to take preventive methods, especially health care providers talked about they didn't inquire further and instead concentrated on offering advice on healthy lifestyle choices like altering eating habits, exercising, avoiding meat, salt, and fatty oils, consuming less alcohol, taking regular medication and follow appointments.

*"Now that everyone is aware that hypertension can kill you instantly, there is a common misconception that if a patient is diagnosed with high blood pressure and asked to begin medication, they will refuse, believing that the condition can be treated over time with exercise and a change in lifestyle. However, some patients present with emergency hypertension and pass away, so we advise starting medication as soon as possible and stopping it if the patient's condition improves****". (KII, Medical doctor)***

Patients felt that since traditional medicines are unproven, they should only be used in combination with prescription drugs and home remedies made from traditional plants, and they should not be recommended to other people. The dose and timing are the main issues with traditional medicine that needs future exploration.

"If a check-up confirms that hypertension is present, we ought to cease using salt and alcohol. You know, modern medical care should be interwoven with culture; receiving care is a duty, just like using natural remedies. Shared culture medications should be given to this family by all

*family heads. Medical personnel ought to accept accountability for their actions and offer both medical care and health education. The efficacy of traditional medicine is very high****". (70 years old Patient, FGD)***

6. Discussion

WHO recommends adopting a healthy diet that is rich in fruits, vegetables, whole grains, and lean proteins. Emphasis is placed on reducing salt intake to less than 5 grams per day that is equivalent to about one teaspoon. Regarding specific herbal remedies studies generally advise caution due to variability in effectiveness and potential interactions with prescribed medications. There is limited scientific evidence supporting the use of herbal remedies as standalone treatments for hypertension. while lifestyle modifications and certain home remedies can complement medical treatment for hypertension (84-86). In this study three main themes were developed from eight subthemes. The main themes were use of traditional herbal medicine as home remedies with three subthemes, (Types of herbal home remedies used, Source of information on home remedies, Challenges and side effects), Healthy life style practice with two subthemes (Healthy dietary eating habit, Physical exercise) , and patients' experience and perspectives to home remedy practice contain three subthemes (Perceived beliefs on efficacy of home remedies , Perceptions on the safety of home remedies, Perceived recommendations).

In the study, most of the participants reported that they have used home-prepared herbal plants as a treatment option for hypertension. The patients with hypertension have used moringa tea, Ginger, lemon, garlic, red onion, green tea, Rumex abyssinicus, flaxseed, banana, bean, coriander, nettles, turmeric, Bitter leaf juice, black cumin tea, and Ruta chalepensis, white lupin, Damascus leaves, dill, Garden Cress, and Calpurnia Aurea. All these remedies were prepared as tea, with food or by diluting with water in an empty stomach. This is consistent with the studies in USA, Uganda and Cameron stated that patients used traditional medicine as their first line of therapy for most illnesses, with older persons using it more frequently. Most of the time, free local herbs have been used in traditional treatments(20, 81, 87). Most participants reported leaves, fruits, roots, seeds, stems, and whole herbs have been reported by the participants as parts of plants used to manage their hypertension(88).

The participants got information about home remedies from the internet, asked about other hypertensive patient experiences. Positive experiences shared by peers can encourage individuals to try these remedies themselves. Most of the participants reported that they first tried traditional homemade remedies before consulting medical professionals to start modern hypertension treatment. This was comparable with the studies explored that these traditional treatments information was exchanged from paste experience, friends or neighbors traditional medicine practitioner, and family members and friends(89). It was reported that patients did not consult health care providers about herbal home remedy which is consistent with the study describes that the disclosure of herbs use for hypertension were more than half of the patients did not discuss the use of herbs with their health care provider(85, 89, 90).

The fact that some participants began taking herbal medications without first seeing a doctor was also mentioned. After experiencing side effects and not seeing any improvement in their blood pressure, several study participants stopped taking the medicine. Patients also mentioned that they could not easily obtain or use herbal remedies when they needed them, particularly when their blood pressure was elevated. They don't know how to prepare it or where to store it, in addition to not understanding what amounts to take. This was consistent with the studies explained that use of home remedies may have benefits and side effects(89). The study in Sierra Leone stated that majority of herb users believed that using herbal medication had no negative consequences(91). On the other hand, the study in Nigeria revealed that some individuals who concurrently administered medical and herbal treatments experienced negative side effects like diarrhea, nausea, palpitations, skin responses, erectile dysfunction, and diarrhea(90).

In this study patients with hypertension explored how they tried to implement healthy eating habits after diagnosis. These included lowering their intake of salt, avoiding fatty meat, exercising to prevent weight gain, eating more vegetables, going to appointments on time, and taking their prescribed medication. In order to modify the nutritional status, began cooking and consuming these approved items at home, such as grains, flax, onions, fruits. The participants talked about the necessity for scientific measurement of dietary habits in order to determine the right nutrients and dietary practices for effective prevention of hypertension. The participants disclosed that they needed to embrace healthy eating habits, adhere to nutritionists' advice, and decrease back on their intake of alcohol and salt. The majority of them attempted to engage in

planned physical activity, and some participants claimed that their manual labor prevented blood pressure spikes and helped them avoid weight gain. These was in line with the studies described that patients with hypertension have to take dietary modification and physical exercise for proper controlling and prevention of complications(85, 92-94)

The respondents talked about the importance of vegetables and plants as traditional home remedies to lower their blood pressure. It was mentioned that these locally sourced, passed generation-to-generation medicines are safe and work as intended. It was reported that most of the study participants have used traditional home remedy treatments before the start of modern hypertensive medication by assuming they are effective if taken appropriately. The study participant who has experience in providing herbal remedies discussed that these traditional therapies are effective since they give follow up with a local clinic after giving the herbal treatment and get feedback letters back stating that they are in better health. This is comparable with the studies discussed that if traditional home remedy had connection with local medical clinic treatment with appropriate referral systema and feedback mechanism it can effectively manage patients with minimal side effects and drug interactions. In Philippines the majority of them were taking it in addition to traditional medicine as part of their medical treatment. Due to the participants' perception that home remedies were an effective means to treat hypertension, they were more likely to utilize them(95). In Brazil Patients with high hypertension believed that using medicinal plants and herbs might effectively reduce their blood pressure, as demonstrated by both home blood pressure monitoring and periodic hospital examinations(88).

The study explored the use of several herbal medications by individuals with hypertension; nevertheless, due to their non-evaluation by relevant organizations, their negative effects may exacerbate other chronic illnesses that are more complex. Patients also felt that since traditional medicines are unproven, they should only be used in combination with prescription drugs and home remedies made from traditional plants, and they should not be recommended to other people. The research participant talked about how these natural therapies need to be thoroughly investigated with the help of professionals and clinical studies in order to determine their dosage, frequency, and likely adverse effects. This was in line with the studies discussed that use of homemade traditional treatments needs clinical trial to confirm the dose, frequency and preparation for better management and use for hypertensive patients(96-98). The possibility of

herb-drug interactions is becoming more widely recognized, but there is still no clinical evidence to support its importance, which makes it difficult for consumers and professionals to decide on a safe combination of herbal and conventional medications(99, 100).

7. Limitation of the study

These results cannot be automatically generalized to the entire population of patients with patients with hypertension, which is one of the methodological limitations of the current study.

8. Conclusion

The finding of this study showed home remedy practices among hypertension patients in Bahir Dar city, hypertensive patients who were on follow up. eight subthemes, from three major themes were developed. The three subthemes that made up the main themes were: using traditional herbal medicine as home remedies (types of herbal home remedies used, source of information on home remedies, challenges and side effects), Healthy life style practice with two subthemes (healthy dietary eating habit, physical exercise) , and patients' experience and perspectives to home remedy practice contain three subthemes (perceived beliefs on efficacy of home remedies , perceptions on the safety of home remedies, perceived recommendations).

The patients with hypertension have used moringa tea, Ginger, lemon, garlic, red onion, green tea, Rumex abyssinicus, flaxseed, banana, bean, coriander, nettles, turmeric, Bitter leaf juice, black cumin tea, and Ruta chalepensis, white lupin, Damascus leaves, dill, Garden Cress, and Calpurnia Aurea. All these remedies were prepared and taken as tea, with food or by diluting with water in empty stomach. The participants got information about home remedies from the internet, asked about other hypertensive patient experiences. The majority of them attempted to engage in planned physical activity, and some participants claimed that their manual labor prevented blood pressure spikes and helped them avoid weight gain. Patients also felt that since traditional medicines are unproven, they should only be used in combination with prescription drugs and home remedies made from traditional plants, and they should not be recommended to other people.

9. Recommendations

According to the study finding, the regional health bureau and ministry of health should work together with experts of traditional home remedy providers to develop guidelines for effective management and controlling of hypertension among patients.

To prevent misunderstandings, health care practitioners and other stakeholders should provide accurate information on the proper dietary habits, causes and treatment options for hypertension patients by using different health communication methods. Researcher better to conduct clinical trial study to explore home remedy efficacy, side effects, dose, preparation, and frequency related issues among hypertension patients.

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11. ANNEXES

11.1 Subject Information Sheet (English Version)

Bahir Dar University, College of Health Sciences, Department of Nutrition and dietetics Graduate Studies

Dear participant!

Here, I the undersigned, at Bahir Dar University College of Health Sciences, School of Allied Health Science, Department of Nutrition and dietetics Graduate Study Program, currently I will be undertaking research on a topic entitled as assessment of home remedy practice and associated factors towards hypertension in government and private hospitals of Bahir Dar .For this study, you will be selected as a participant and before getting your consent, you need to know all necessary information related to the study which will be detailed as follows.

Purpose of the study: **HOME REMEDY PRACTICES AMONG HYPERTENSION PATIENTS IN BAHIRDAR CITY, NORTHWEST ETHIOPIA, 2024: A QUALITATIVE STUDY**

Benefits and risk of the study:

Benefits: For your participation in the study no payment will be granted or has no special privilege to you. Your responses to the following questions are beneficial to you and other hypertensive patients as input in improvement of hypertensive home remedy practice and to identify the factors which affect home remedy practice so that recommendations will be made to responsible organizations to fill those gaps.

Risks: The study will be conducted through interviews, and you are being asked for a little of your time to help us in this study. There is no possible risk associated with participating in this study except the time spent responding to the questionnaire.

Confidentiality: Your name will not be written in this form and any information you tell us will not be disclosed to third party. Your participation is voluntary, and you are not obligated to answer any question you do not wish to answer. If you feel discomfort with the question, it is your right to drop it any time you want. If you have questions regarding this study or would like to be informed of the results after its completion, please feel free to contact the principal investigator.

Address of the principal investigator:

Zenebech Dagnew

Cell phone: 0953592759

E-mail: lifelong252925@gmail.com

Are you satisfied with the information provided so far?

1. Yes… Continue to the next page

2. No I won't participate

11.2 Annex II Consent form (English Version)

In undersigning this document, I am giving my consent to participate in the study entitled as "**HOME REMEDY PRACTICES AMONG HYPERTENSION PATIENTS IN BAHIRDAR CITY, NORTHWEST ETHIOPIA, 2024: A QUALITATIVE STUDY**" .I have been informed that the purpose of this study is to assess home remedy practices, types and uses patients in selected government and private hospitals of Bahir Dar, Ethiopia, 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. I have also been informed that my participation or non-participation or my refusal to answer questions will have no effect on me. I understood that participation in this study does not involve risks. I understood that Zenebech Dagnew is the contact person if I have questions about the study or about my rights as a study participant.

Respondent's signature_

Interviewer Name

Signature

Date

11.3 QUESTIONNAIRE (ENGLISH VERSION)

SECTION I

I. Personal Information

1. Name:

2. Age:

3. Gender:

4. Educational Level:

5. Occupation:

Medical History

1. How long have you been diagnosed with hypertension?

2. Are you currently on any prescribed medications for hypertension?

3. Have you ever used home remedies to manage your hypertension?

Home Remedy Practices

1. What types of home remedies do you use to manage your hypertension? (e.g., herbal teas, fruits, spices)

2. How often do you use these home remedies?

3. Have you noticed any changes in your blood pressure after using home remedies?

4. Do you consult with a healthcare professional before using home remedies?

5. What sources do you use to learn about home remedies for hypertension?

6. Do you believe that home remedies are as effective as prescribed medications for hypertension?

7. Have you made any lifestyle changes in conjunction with using home remedies?

Perceptions and Experiences

1. How would you rate the effectiveness of home remedies in managing your hypertension?

2. Have you faced any challenges or obstacles in using home remedies?

3. What are your perceptions of the safety of home remedies compared to prescribed medications?

4. Would you recommend home remedies to other hypertension patients?

5. Is there anything else you would like to share about your experiences with using home remedies for hypertension?

11.4 Amharic version questionnaire for IDI

የ ግል ሚ ጃ

1. ስ ም:
2. ዕ ድ ሜ
3. ጾ ታ:
4. የ ት ም ህ ር ት ደ ረ ጃ:
5. ሥ ራ:

የ ሕ ክ ም ና ታ ሪ ክ

1. የ ደ ም ግ ፊ ት በ ሽ ታ እ ን ዳ ለ ብ ህ ለ ም ን ያ ህ ል ጊ ዜ ታ ወ ቀ?
2. በ አ ሁ ኑ ጊ ዜ ለ ደ ም ግ ፊ ት በ ማ ን ኛ ው ም የ ታ ዘ ዙ መ ድ ሃ ኒ ቶ ች ላ ይ ነ ዎ ት?
3. የ ደ ም ግ ፊ ት ዎ ን ለ መ ቆ ጣ ጠ ር የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ን ተ ጠ ቅ መ ው ያ ው ቃ ሉ?

የ ቤ ት ው ስ ጥ ሕ ክ ም ና ል ም ዶ ች

1. የ ደ ም ግ ፊ ት ን ለ መ ቆ ጣ ጠ ር ም ን አ ይ ነ ት የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ይ ጠ ቀ ማ ሉ? (ለ ም ሳ ሌ የ እ ፅ ዋ ት ሻ ይ፣ ፍ ራ ፍ ሬ፣ ቅ መ ማ ቅ መ ም)
2. እ ነ ዚ ህ ን የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ም ን ያ ህ ል ጊ ዜ ይ ጠ ቀ ማ ሉ?
3. የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ን ከ ተ ጠ ቀ መ ብ ኋ ላ በ ደ ም ግ ፊ ት ዎ ላ ይ ም ን ም አ ይ ነ ት ለ ው ጥ አ ስ ተ ው ለ ዋ ል?
4. የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ን ከ ማ ጠ ቀ ም ዎ በ ፊ ት ከ ጠ ፍ ባ ለ ሙ ያ ጋ ር ያ ማ ክ ራ ሉ?
5. ስ ለ የ ደ ም ግ ፊ ት የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ለ ማ ወ ቅ ም ን ም ን ሬ ቾ ች ይ ጠ ቀ ማ ሉ?
6. የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ለ ደ ም ግ ፊ ት እ ን ደ ታ ዘ ዙ መ ድ ሃ ኒ ቶ ች ው ጤ ታ ማ ና ቸ ው በ ለ ው ያ ም ና ሉ?
7. የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ን ከ ማ ጠ ቀ ም ጋ ር ተ ያ ይ ዞ ም ን ም አ ይ ነ ት የ አ ና ና ር ለ ው ጥ አ ድ ር ገ ዋ ል?

ግ ን ዛ ቤ ዎ ች እ ና ል ም ዶ ች

1. የ ደ ም ግ ፊ ት ን ለ መ ቆ ጣ ጠ ር የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ን ው ጤ ታ ማ ሽ ት እ ን ዴ ት ይ ገ መ ማ ሉ?
2. የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ን ለ ማ ጠ ቀ ም ም ን ም አ ይ ነ ት ፈ ተ ና ዎ ች ወ ይ ም ሚ ና ክ ሎ ች አ ጋ ጥ መ ው ዎ ታ ል?
3. ከ ታ ዘ ዙ መ ድ ሃ ኒ ቶ ች ጋ ር ሲ ነ ፃ ፁ ስ ለ የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ደ ህ ን ነ ት ያ ለ ዎ ት ግ ን ዛ ቤ ም ን ድ ን ነ ው?
4. ለ ሌ ሎ ች የ ደ ም ግ ፊ ት በ ሽ ተ ኞ ች የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ን ይ መ ክ ራ ሉ?
5. የ ቤ ት ው ስ ጥ መ ድ ሃ ኒ ቶ ች ን ለ ደ ም ግ ፊ ት ከ ማ ጠ ቀ ም ጋ ር ስ ለ ል ም ዶ ቻ ች ሁ ማ ካ ፈ ል የ ም ት ፈ ል ጉ ት ሌ ላ ነ ገ ር አ ለ?

11.5 Homemade remedy Practice FGD assessment tools

1 What are your experiences in using different types of home remedy practices?

2 What types of homemade remedies you are using to treat hypertension?
Would you tell us the names please?

3 Do you think that using homemade remedy types indicated above helps to treat hypertensive patients?

4 What do you think are about the uses of homemade remedy practices?

5 What are your perceptions of the safety of home remedies compared to prescribed medications?

6 Have you discussed with doctors for using homemade remedy practices?

7 How is your lifestyle practices/physical exercise as no smoking or alcohol, weight reduction, a low-salt diet, increased self-monitoring, and stress reduction, (What type of physical activity you do and for how long to reduce hypertension (e.g., 30 minutes of walking, 4–5 times per week)?

8 Do you have something to say about home remedy types, practices and uses that you think is un discussed?

11.6 AMHARIC VERSION FGD tool

1. የ ተለዩ በቤት ወስጥ የ ሚዘ ጋጁ ባህላዊ የ ደ ምግፊት መከላከያ መድሃ ኒ ቶች ላይ ያለ ዎት ልምድ ምን ድን ነ ው?

2 ምን አይነ ት የ ተለዩ በቤት ወስጥ የ ሚዘ ጋጁ ባህላዊ የ ደ ምግፊት መከላከያ መድሃ ኒ ት አይነ ቶችን ይጠቀሚሉ ስ ማቸወን ሊነ ግሩን ይችላ ሉ ወይ?

3. እነ ዚህ በቤት ወስጥ የ ሚዘ ጋጁ ባህላዊ የ ደ ምግፊት መከላከያ መድሃ ኒ ት አይነ ቶች የ ደ ምግፊት በሽታን ለመቆጣጠር ይረዳሉ ብለ ውያስ ባሉ?

4. እነ ዚህበቤ ት ወስጥ የ ሚዘ ጋጁ ባህላዊ የ ደ ምግፊት መከላከያ መድሃ ኒ ቶች ምን ምን ጥቅም እን ዳላ ቸው ሊነ ግሩን ይቸላ ሉ ?

5. እነ ዚህበቤ ት ወስጥ የ ሚዘ ጋጁ ባህላዊ የ ደ ምግፊት መከላከያ መድሃ ኒ ቶች ደህን ነ ት ከዘ መና ዊ መድሃ ኒ ቶች ጋር ሲነ ጻጸር እን ዲት ያዩ ታል?

6. እነ ዚህን በቤ ት ወስጥ የ ሚዘ ጋጁ ባህላዊ የ ደ ምግፊት መከላከያ መድሃ ኒ ቶችን እን ደሚጠቀመከ ዶክተሮች ጋር ተወያይተውያ ወቃሉ ?

7.የደምግፉትን ለመከላከል የእርሰዎ የአኗኗር እና ያመጋገብ ዘይቤዎት ምን ይመስላል?

8. ስለነዚህ በቤት ወስጥ የሚዘጋጁ ባህላዊ የደምግፊት መከላከያ መድሃኒት አይነቶች ፣ ጥቅሞች እና ጉዳቶች ያልነገሩን ቀረ ሚኡት ሃሳብ ካለ?

SECTION III. KEY INFORMANTE INTERVIEW TOOL (KII)

11.7 KII data collection tool for traditional medicine and modern professionals

ID no----------Age: ----------sex---------- Educational Level: ---------- Years of experience----------

1. How do you diagnose hypertension patients?
2. Have you ever used home remedies to manage your hypertension patients?
3. What types of home remedies do you use to manage your hypertension? (e.g., herbal teas, fruits, spices)
4. How often do you use these home remedies?
5. Have you noticed any changes in patients' blood pressure after using home remedies?
6. What sources do you use to learn about home remedies for hypertension?
7. Do you believe that home remedies are as effective as prescribed medications for hypertension?
8. Have you faced any challenges or obstacles in prescribing home remedies?
9. What are your perceptions on the safety of home remedies compared to prescribe modern medications?
10. Have you Advice patients to engage lifestyle changes (regular physical activity? dietary habits? stop alcohol, smoking?)
11. Is there anything else you would like to share about your experiences in prescribing home remedies for hypertension patients.

11.8 Amharic version KII TOOL

1.እንዴት ነውየደምግፊት ታካሚዎችን ህክምና ምታደርጉላቸው?

2.የደም ግፊትን ላመም በቤት ወስጥ ሚዘጋጁ የደም ግፊት መቆጣጠሪያዎችን ተጠቅመውያውቃሉ ወይ?

3.ምን ምን አይነት በቤት ወስት ሚዘጋጁየደምግፊት መቆጣጠሪያዎችን ተጠቅመዉያውቃሉ?

4.እነዚህን በቤት ወስጥ ሚዘጋጁ የደም ግፊት መቆጣጠሪያዎች ለምን ያህል ግዜ ለ ታካሚዎች ስጥተውያውቃሉ?

5.ታካሚዎች እነዚህን በቤት ወስጥ ሚዘጋጁየደምግፊት መቆጣጠሪያዎች ከ ተጠቀመብኋላ የደም ግፊት ማጠናቸውመሻተካከሉን አይተዋል?

6.በቤት ወስጥ ሚዘጋጁየደምግፊት መቆጣጠሪያዎች ምንጭውከምን ነውሚ ኙት?

7.እነዚህ በቤት ወስጥ ሚዘጋጁ የደም ግፊት መቆጣጠሪያዎች እንደ ዘመናዊ ህክምና ወጤታማ ናቸውብለውያምናሉ?

8.እነዚህ በቤት ወስጥ ሚዘጋጁ የደም ግፊት መቆጣጠሪያዎች በሚሰጠት ግዜ ያጋጠምዎት እንቅፋት ወይምችግር አለ?

9.ከ ዘመናዊ መድሃኒቶች ጋር ሲዎዳደሩ በቤት ወስት የሚዘጋጁየደምግፊት መቆጣጠሪያዎች ላይ ያለዎት እይታ ምንድን ነው?

10.ታካሚዎቻችሁን ያኑዋኗርር ዘዴ ፣የሰዉነት እንቅስቃሴ፣ያመጋገብ ስርአት ወይም ምን መመገብ እንዳለባቸው፣ አልኮል እንዲያቆሙእና ሲጋራ እንዲያቆሙትመከራላችሁ ወይ?

11.በቤት ወስጥ የሚዘጋጁ የደም ግፊት መቆጣጠሪያዎችን እንዲጠቀሙተጨማሪ ልምዶች ካለዎት ሊያካፍሉን ይችላሉ?