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Traditional Herbal Medicine in the Management of Chronic Diseases

Dr. Madhu Dubey Swarnkar[1]

[1]Assistant Professor (Chemistry), Govt MH Girls PG College, Jabalpur (MP).

Abstract

Traditional herbal medicines have been utilised for thousands of years to treat chronic ailments, but there are little scientific research on their knowledge, belief, and application. Participating participants' knowledge, belief in the efficacy, perceived safety, and use of herbal medicines for chronic illness management are the focus of this research. A total of 227 participants were asked to fill out a structured questionnaire that included questions about their demographics and statements that could be rated using a five-point Likert scale. Descriptive statistics showed a broad belief in the therapeutic effects of popular medicinal herbs and a reasonable level of knowledge with them. The frequency of herbal medicine use is significantly impacted by more knowledge and a larger belief in its efficacy, according to ANOVA and correlation studies. Perceived safety, on the other hand, greatly predicts the desire to continue using the medicine. The research results show that herbal medicines may be a useful supplementary intervention and call attention to the necessity of educational campaigns to promote informed use. The research sheds light on how to safely combine current methods of managing chronic diseases with traditional therapies.

Keywords; Herbal medicine, Chronic disease, Knowledge, Belief, Perceived safety.

INTRODUCTION

Diabetes, high blood pressure, heart conditions, arthritis, and several respiratory illnesses are just a few examples of the chronic diseases that continue to be a major health burden worldwide. These diseases continue to be a leading cause of death and disability globally, according to the World Health Organisation. Even when they work, conventional allopathic therapies might be problematic in the long run due to their potential side effects and the fact that they typically need to be taken continuously. Because of this, there has been a resurgence of interest in traditional herbal medicine as an alternative or supplementary treatment option, both among scientists and the general population.

Traditional herbal medicine is based on centuries' worth of bioactive plant knowledge. Before modern medicine, botanicals were the main treatment for long-term ailments in many indigenous societies throughout Africa, Asia, and other parts of the world. Secondary metabolites including alkaloids, flavonoids, phenolics, terpenoids, and saponins are primarily responsible for the medical effects of these plants, making their chemistry all the more crucial [1].

These chemicals have a lot of potential for managing chronic diseases because of their antioxidant, anti-inflammatory, hypoglycemic, and cardioprotective activities. Over the last several decades, scientists have been working to identify and define these phytochemicals, delving into their molecular methods of action. Some compounds, like flavonoids, are known to scavenge free radicals, while others, like alkaloids, are known to interact with particular metabolic pathway receptors or enzymes. These results show that traditional medicines may still be a source of inspiration for new therapeutic molecules, and they also point to a rising interface between traditional knowledge and contemporary chemistry.

Chemistry of Bioactive Phytochemicals

Phytochemicals, sometimes referred to as phytonutrients, are naturally occurring bio-active molecules that may be found in high concentrations in foods including fruits, vegetables, nuts, seeds, legumes, tea, and dark chocolate [2]. A subset of phytochemicals known as bioactive phytochemicals have health-promoting biological effects on both humans and animals. Because of the positive impacts on human health, the presence of bioactive phytochemicals in food that have nutraceutical qualities is very important.

Their structural diversity gives rise to a wide range of pharmacological properties that can help prevent or manage chronic diseases. Understanding the chemistry of these compounds is essential for identifying their mechanisms of action and potential therapeutic applications.

Chemical Classes

i. Alkaloids

Alkaloids are nitrogen-containing organic compounds, often basic in nature, and typically exhibit pronounced physiological activity. Examples include morphine, quinine, and berberine.

Chemical Insight: Most alkaloids contain heterocyclic nitrogen atoms, which enable them to interact with neurotransmitter receptors or enzymes.

ii. Flavonoids

Flavonoids are polyphenolic compounds with a C6–C3–C6 skeleton. They are responsible for pigmentation in plants and act as potent antioxidants.

Role in Chronic Disease: Their ability to scavenge free radicals helps reduce oxidative stress implicated in cardiovascular disorders and diabetes.

iii. Phenolic Acids

These compounds include hydroxybenzoic and hydroxycinnamic acids. Phenolic acids are effective in modulating inflammatory pathways and protecting lipids from peroxidation.

iv. Terpenoids (Isoprenoids)

Terpenoids are built from isoprene units and form the largest class of plant metabolites. They possess anti-inflammatory and anticancer properties and are often found in essential oils.

v. Saponins

Glycosidic in nature, saponins form soap-like foams when shaken in water. They can reduce cholesterol levels and support immune function.

Structural Features and Biological Relevance

i. **Functional Groups:** Hydroxyl, methoxy, and glycosidic linkages often dictate solubility and bioavailability.
ii. **Conjugation and Aromaticity:** Provide stability to free radicals, explaining antioxidant activity.
iii. **Molecular Weight:** Affects absorption and metabolism, influencing therapeutic potential.

Table 1 Major Classes of Bioactive Phytochemicals

Class of Compound	Core Chemical Structure	Common Plant Sources	Notable Biological Activities
Alkaloids	Nitrogen-containing heterocycles	Rauwolfia, Cinchona, Berberis	Antihypertensive, antimalarial, analgesic
Flavonoids	Polyphenolic C6–C3–C6 skeleton	Citrus fruits, Green tea, Berries	Antioxidant, anti-inflammatory, cardioprotective
Phenolic acids	Aromatic ring with hydroxyls	Coffee, Berries, Whole grains	Antioxidant, anti-inflammatory
Terpenoids	Isoprene (C5) repeating units	Mint, Eucalyptus, Ginkgo	Anti-cancer, anti-inflammatory, antimicrobial
Saponins	Steroid/triterpenoid glycosides	Soybeans, Chickpeas, Ginseng	Cholesterol-lowering, immune-modulating

Herbal Medicine and Their Bioactive Phytochemicals

Traditional herbal medicine is validated by contemporary phytochemical research and is based on centuries of empirical knowledge. A wide variety of secondary metabolites contribute to the medicinal properties of medicinal plants. Herbs aid in the management of chronic diseases including diabetes, hypertension, arthritis, and cardiovascular problems via the chemistry of these metabolites [3].

i. **Synergistic Action**

Whole-plant preparations often exhibit greater efficacy than isolated compounds because multiple phytochemicals work together to target different biochemical pathways.

ii. **Chemical Diversity**

Herbs contain alkaloids, flavonoids, terpenoids, phenolic acids, saponins, and glycosides, each with distinct molecular structures and biological activities.

iii. **Therapeutic Relevance**

These bioactive constituents display antioxidant, anti-inflammatory, hypoglycemic, and cardioprotective properties that are crucial in chronic disease management.

Most common Herbs and their major phytochemicals:

i. **Turmeric (Curcuma longa)**
   a. **Main Compound:** Curcumin (a diarylheptanoid polyphenol)
   b. **Activity:** Potent antioxidant and anti-inflammatory, regulates NF-κB signaling.

ii. **Neem (Azadirachta indica)**
   a. **Main Compounds:** Azadirachtin (limonoid), nimbin
   b. **Activity:** Antimicrobial, antidiabetic, supports liver function.

iii. **Garlic (Allium sativum)**
   a. **Main Compounds:** Allicin, diallyl sulfides
   b. **Activity:** Cardioprotective, antihypertensive, lipid-lowering.

iv. **Ginger (Zingiber officinale)**
   a. **Main Compounds:** Gingerols, shogaols
   b. **Activity:** Anti-inflammatory, antiemetic, supports metabolic health.

v. **Tulsi / Holy Basil (Ocimum sanctum)**
   a. **Main Compounds:** Eugenol, ursolic acid
   b. **Activity:** Immunomodulatory, antioxidant, anti-stress.

vi. **Ashwagandha (Withania somnifera)**
   a. **Main Compounds:** Withanolides (steroidal lactones)
   b. **Activity:** Adaptogenic, anti-inflammatory, neuroprotective.

Table 2 Representative Medicinal Plants and Principal Bioactive Phytochemicals

Herbal Plant (Scientific Name)	Major Phytochemicals	Notable Chemical Class	Primary Biological Activities
Turmeric (Curcuma longa)	Curcumin, Demethoxycurcumin	Polyphenolic diarylheptanoids	Antioxidant, anti-inflammatory, anticancer
Neem (Azadirachta indica)	Azadirachtin, Nimbin, Nimbidin	Limonoids, terpenoids	Antidiabetic, hepatoprotective, antimicrobial
Garlic (Allium sativum)	Allicin, Diallyl disulfide	Organosulfur compounds	Cardioprotective, antihypertensive, cholesterol-lowering
Ginger (Zingiber officinale)	[6]-Gingerol, Shogaol	Phenolic ketones	Anti-inflammatory, antiemetic
Tulsi (Ocimum sanctum)	Eugenol, Ursolic acid	Phenylpropanoids, triterpenoids	Antioxidant, adaptogenic
Ashwagandha (Withania somnifera)	Withanolides	Steroidal lactones	Adaptogenic, neuroprotective

Key Chemical Considerations

i. **Functional Groups:** Hydroxyl, methoxy, and sulfur groups often drive antioxidant and enzyme-modulating effects.
ii. **Extraction Techniques:** Solvent polarity and temperature influence the yield of sensitive compounds such as flavonoids or terpenoids.
iii. **Bioavailability:** Many phytochemicals require conjugation with lipids or piperine-like enhancers for effective absorption.

Analytical Methods

Modern techniques such as High-Performance Liquid Chromatography (HPLC), Liquid Chromatography–Mass Spectrometry (LC–MS), and Nuclear Magnetic Resonance (NMR) spectroscopy are essential to identify and quantify these compounds, ensuring consistency and safety in herbal formulations.

Herbal Medicines in the Management of Chronic Diseases

Traditional herbal medicine has a long history of use, and it is now well acknowledged that it may help with the

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treatment and prevention of chronic diseases. There is a wide variety of chronic diseases that may be effectively treated with herbal medications. These pharmaceuticals come from plants and include bioactive compounds that have anti-inflammatory, antioxidant, anticancer, and antidiabetic action. Modern science is confirming the medicinal potential of several plant compounds, and many cultures have long relied on herbal medicine to improve health and well-being [4]. Part of the reason for the uptick in interest in herbal medicine is the fact that it is all-natural, and there is growing anxiety about the drawbacks and risks of synthetic pharmaceuticals, which only provide short-term comfort and may lead to addiction or other problems. The therapeutic benefits of herbal medicines are achieved via a variety of molecular mechanism modulation strategies. Apoptosis, inflammation, oxidative stress, and immunological response are among several processes that are influenced. Phytochemicals, such as alkaloids and flavonoids, have anti-inflammatory and antioxidant capabilities that help ameliorate the pathophysiology of underlying diseases including diabetes and cardiovascular disease. Numerous other phytochemicals have the potential to bind to specific enzymes or transcription factors, hence impacting disease-related gene expression. Such processes may be better understood in order to develop novel therapies that combine herbal and conventional medicines and to find the most efficient herbal cures for certain diseases. Integrating herbal medicine into conventional medicine is fraught with difficulties, despite the fact that it has therapeutic promise. Since the quality and content of herbal remedies might differ according to plant species, geographical area, and extraction processes, this poses a big obstacle. It is also important to think about the potential toxicity of certain herbal components and herb-drug interactions, particularly when using them with traditional medicine. Standardisation of herbal formulations and thorough clinical studies are necessary to overcome these obstacles. It is equally crucial to comprehend the public's views on herbal medicine and its applications.

LITERATURE REVIEWS

According to a study conducted by Tassew et al. in 2024 [5], a significant number of people managing chronic diseases reported using HM. Factors significantly linked with HM usage were being female, residing in a rural area, having a disease duration of more than 5 years, and experiencing complications. Important consequences for healthcare treatment arise from the high frequency of HM use among Ethiopian patients with chronic illnesses. A patient-centered approach that encourages open, judgment-free conversations regarding HM consumption should be adopted by healthcare practitioners. In order to maximise treatment safety and minimise the risk of herb-drug interactions and other negative consequences that may occur from using traditional medicines in conjunction with standard pharmaceuticals for chronic diseases, it is crucial to communicate proactively about these issues. Healthcare practitioners should also show respect for patients' cultural practices and beliefs around HM, which is a cornerstone of cultural competency training.

Peltzer and Pengpid (2019) [6] discovered that many Thai patients with chronic diseases utilise herbal medicines. Some factors that were shown to be linked to the use of herbal medicine include education level, living in a rural area, anxiety, a bad quality of life, and having several chronic diseases. The use of herbal medicine may be better facilitated by health care professionals and policy makers with this knowledge.

According to research conducted by Assi et al. (2024) [7], a significant number of adult Lebanese patients, particularly those with hypertension, diabetes, dyslipidaemia, arthritis, and constipation, turn to herbal medicines for relief. Information on herbal medicines was mostly gathered from family, friends, or the media. Most kinds of medicinal plants are also still used successfully to treat a wide range of chronic diseases. You should be aware that herbal products do not come without danger, and that there is a lack of research on the potential for medication interactions. Since herbal medicines are often suggested by medical professionals, this is of utmost importance.

Traditional medicine (TM) was the only method of treatment for 10.3% of women and 6.8% of men, according to a study by Poli et al. (2025) [8]. Respondents' gender, level of education, monthly income, profession, and location were all statistically related to their use of traditional medicine. People with lower incomes and those living in rural regions were more likely to utilise traditional medicine, according to the research. Users also reported success in controlling chronic diseases with conventional medicine. So, as a whole, people should think about how they might use traditional medicine to help them. Better healthcare results, especially in neglected rural parts of Bangladesh, need a holistic and cooperative strategy between traditional medical practitioners and contemporary healthcare experts, according to this research. The development of standards for the integration of conventional and alternative medicine, the encouragement of studies to determine the effectiveness of conventional treatments, and the guarantee of both cost and

accessibility should be the primary goals of future healthcare policy. Thus, by working together, conventional doctors and modern healthcare experts may provide patients with treatment that is both thorough and balanced.

An overview of herbal medicine's involvement in the therapy of chronic diseases was presented by Shirsat et al. (2023) [9]. Worldwide, healthcare systems face formidable obstacles from chronic diseases including diabetes, heart disease, and arthritis. Research into the possible advantages, action mechanisms, and limits of herbal medicine has been stimulated by the increasing interest in it as a supplementary and alternative treatment. The use of herbal medicine has several promising applications in the treatment of long-term health conditions. These include a decrease in adverse effects compared to certain traditional drugs, antioxidant action, modulation of the immune system, management of metabolism, and alleviation of symptoms. The methods of action of herbal medicine include phytochemical ingredients, modification of gene expression and enzyme activity, and interactions with the gut microbiota. Although herbal medicine may have some positive effects, it is not without its limits and important factors to consider. Consistency and dependability in products are ensured by standardisation and quality control. A number of issues need investigation, including medication interactions, insufficient regulatory supervision, and the requirement for stronger scientific proof. In conclusion, the use of herbal medicine in the treatment of chronic diseases shows promise as an additional or alternate strategy.

RESEARCH OBJECTIVES

i. To assess the level of knowledge about traditional herbal medicines among individuals managing chronic diseases.
ii. To examine the influence of belief in the effectiveness of herbal medicines on their actual use for chronic disease management.
iii. To evaluate the relationship between perceived safety of herbal medicines and the intention to continue their use.
iv. To analyze how trust in herbal practitioners or traditional sources affects the frequency of herbal medicine consumption.

RESEARCH METHODOLOGY

The study adopted a descriptive survey design to explore the role of traditional herbal medicines in the management of chronic diseases. A structured questionnaire was developed, consisting of demographic questions and four key variables: knowledge of herbal medicines, belief in their effectiveness, chronic disease management, and perceived safety. Each variable was measured using five statements rated on a 5-point Likert scale, where 5 represents strongly agree and 1 represents strongly disagree. The target population included individuals who have experience with chronic disease management and/or herbal medicine use. Respondents were selected using a purposive sampling technique to ensure that participants were familiar with herbal remedies. Data collection was carried out through both online and in-person surveys. Collected data were tabulated and analyzed using descriptive statistics including mean, standard deviation, and frequency distribution. Correlation analysis was used to examine the relationships among knowledge, belief, perceived safety, and self-reported management outcomes. The methodology ensured that both qualitative perceptions and quantitative patterns of herbal medicine use were captured to provide a comprehensive understanding of their role in chronic disease management.

Table 3 Research Methodology

Methodological Component	Description
Research Design	Descriptive survey study
Population	Individuals with chronic diseases and/or experience in herbal medicine use
Sampling Technique	Purposive sampling
Data Collection Instrument	Structured questionnaire
Questionnaire Structure	Demographic questions + 4 variables (Knowledge, Belief, Chronic Disease Management, Safety)
Response Scale	5-point Likert scale (5 = Strongly Agree, 1 = Strongly Disagree)
Number of Statements per Variable	5
Data Collection Method	Online and in-person surveys
Data Analysis Techniques	Descriptive statistics (mean, SD, frequency) and correlation analysis
Ethical Considerations	Voluntary participation, confidentiality, informed consent

DATA ANALYSIS AND INTERPRETATION

The survey responses were organized and coded according to the study variables: knowledge of herbal medicines, belief in their effectiveness, chronic disease management practices, and perceived safety. Descriptive statistics were first calculated to summarize the general trends and patterns among respondents. Subsequently, inferential statistical techniques, including ANOVA and correlation analysis, were applied to examine the relationships between variables and to test the proposed hypotheses. This approach ensures

a systematic and comprehensive understanding of how knowledge, beliefs, and perceptions influence the use of herbal medicines in managing chronic diseases.

Table 4 Age group

Age group					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 years to 25 years	29	12.8	12.8	12.8
	26 years to 35 years	87	38.3	38.3	51.1
	36 years to 45 years	68	30.0	30.0	81.1
	46 years and above	43	18.9	18.9	100.0
	Total	227	100.0	100.0	

The data on age distribution of respondents indicates that the majority of participants fall within the 26 to 35 years age group, comprising 38.3 percent of the total sample. The 36 to 45 years group follows with 30.0 percent, while 18 to 25 years accounts for 12.8 percent of respondents. Those aged 46 years and above represent 18.9 percent of the sample. Overall, more than two-thirds of respondents (68.3 percent) are between 26 and 45 years, suggesting that middle-aged adults constitute the primary group involved in the study on herbal medicine use and chronic disease management

Table 5 Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	99	43.6	43.6	43.6
	Female	128	56.4	56.4	100.0
	Total	227	100.0	100.0	

The gender distribution of respondents shows that females constitute the majority, with 56.4 percent of the total sample, while males account for 43.6 percent. This indicates a slightly higher participation of women in the study, suggesting that female respondents may be more engaged or available for survey participation regarding herbal medicine use and chronic disease management.

Table 6 Do you have any chronic illness?

Do you have any chronic illness?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	72	31.7	31.7	31.7
	No	155	68.3	68.3	100.0
	Total	227	100.0	100.0	

The data on the presence of chronic illness among respondents indicates that 31.7 percent reported having a chronic condition, while the majority, 68.3 percent, did not report any chronic illness. This suggests that while a significant portion of the sample manages chronic diseases, most participants are without such conditions, providing a balanced perspective on herbal medicine knowledge, beliefs, and usage across both affected and non-affected individuals.

Table 7 Descriptive Statistics

Descriptive Statistics					
	N	Min	Max	Mean	S.D.
I am familiar with common medicinal plants used for chronic diseases.	227	1	5	3.15	1.504
I know the main uses of herbal medicines for chronic conditions.	227	1	5	2.11	1.327
I understand the chemical components that make herbal medicines effective.	227	1	5	1.99	1.253
I am aware of how to prepare herbal remedies properly.	227	1	5	2.09	1.315
I am confident in my knowledge of different herbal medicines and their applications.	227	1	5	2.42	1.513
I believe herbal medicines can improve the management of chronic diseases.	227	1	5	3.03	1.235
I trust that herbal remedies provide real health benefits.	227	1	5	2.15	1.233
I believe herbal medicines can be as effective as conventional treatment for certain conditions.	227	1	5	1.92	1.142
I think regular use of herbal medicines can maintain better health.	227	1	5	2.46	1.347
I believe herbal remedies can enhance overall quality of life in chronic disease patients.	227	1	5	2.49	1.449
Using herbal medicines helps me manage symptoms of my chronic illness.	227	1	5	2.82	1.434
Herbal remedies support my daily health and activity levels.	227	1	5	2.15	1.342

Herbal medicines improve my overall control over my chronic disease.	227	1	5	2.12	1.294
I consistently use herbal medicines as part of my chronic disease management routine.	227	1	5	2.53	1.314
I notice positive changes in my health when I use herbal medicines regularly.	227	1	5	2.36	1.357
I consider herbal medicines to be safe for regular use.	227	1	5	2.81	1.587
I feel confident using herbal medicines for managing chronic conditions.	227	1	5	2.16	1.428
I believe herbal medicines have fewer side effects than many synthetic drugs.	227	1	5	2.19	1.371
I trust that properly prepared herbal medicines are safe.	227	1	5	2.43	1.293
I feel comfortable recommending herbal remedies to others for chronic disease management.	227	1	5	2.29	1.348
Valid N (listwise)	227				

The descriptive statistics indicate that respondents have moderate to low knowledge, beliefs, and practices regarding herbal medicines in chronic disease management. For knowledge of herbal medicines, the mean scores ranged from 1.99 to 3.15. The highest mean (3.15) for familiarity with common medicinal plants suggests that respondents are slightly above neutral in their awareness, while lower means such as 1.99 for understanding chemical components indicate limited technical knowledge. Regarding belief in effectiveness, mean scores from 1.92 to 3.03 reflect that respondents have moderate confidence in herbal medicines' ability to improve health and manage chronic conditions. For chronic disease management behaviors, mean values ranging from 2.12 to 2.82 suggest that respondents somewhat use herbal medicines to manage symptoms and maintain daily health routines. Concerning perceived safety, the mean scores between 2.16 and 2.81 indicate moderate confidence in the safety of herbal medicines. The standard deviations, ranging from 1.142 to 1.587, show some variation in responses, reflecting differences in individual experience, knowledge, and trust in herbal remedies. Overall, respondents show moderate familiarity, belief, and use of herbal medicines with generally positive perceptions of safety, but there remains room for improvement in technical knowledge and confidence in their chemical mechanisms and effectiveness.

Hypotheses testing

H_{01}: There is no significant impact of knowledge of herbal medicines on their use for the management of chronic diseases.

Table 8 ANOVA

ANOVA					
Chronic Disease Management					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1029.345	10	102.934	39.800	.000
Within Groups	558.638	216	2.586		
Total	1587.982	226			

The ANOVA results indicate a statistically significant impact of knowledge on the use of herbal medicines for managing chronic diseases. The between-group variance (Mean Square = 102.934) is substantially higher than the within-group variance (Mean Square = 2.586), yielding an F-value of 39.800 with a p-value of 0.000. Since the significance is below 0.05, the null hypothesis is rejected, confirming that higher knowledge is associated with greater use of herbal medicines in chronic disease management.

H_{02}: There is no significant impact of belief in the effectiveness of herbal medicines on the frequency of their use for chronic disease management.

Table 9 ANOVA

ANOVA					
Chronic Disease Management					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1106.648	12	92.221	41.001	.000
Within Groups	481.334	214	2.249		
Total	1587.982	226			

The ANOVA results show a statistically significant effect of belief in the effectiveness of herbal medicines on their use for chronic disease management. The between-group variance (Mean Square = 92.221) is much higher than the within-group variance (Mean Square = 2.249), resulting in an F-value of 41.001 with a p-value of 0.000. Since the significance level is below 0.05, the null hypothesis is rejected, indicating that stronger belief in the effectiveness of herbal medicines is associated with more frequent use in managing chronic diseases.

H_{03}: There is no significant relationship between perceived safety of herbal medicines and the intention to continue using them for chronic disease management.

Table 10 Correlations

Correlations			
		Chronic Disease Management	Perceived Safety of Herbal Medicines
Chronic Disease Management	Pearson Correlation	1	.832**
	Sig. (2-tailed)		.000
	N	227	227
Perceived Safety of Herbal Medicines	Pearson Correlation	.832**	1
	Sig. (2-tailed)	.000	
	N	227	227
**. Correlation is significant at the 0.01 level (2-tailed).			

The correlation analysis indicates a strong and statistically significant relationship between perceived safety of herbal medicines and the intention to continue using them for chronic disease management. The Pearson correlation coefficient is 0.832 with a p-value of 0.000, which is below the 0.01 significance level. This shows that higher perceived safety is strongly associated with a greater intention to use herbal medicines consistently, leading to the rejection of the null hypothesis.

CONCLUSION

This research, which reflects the respondents' knowledge and attitudes, offers a thorough analysis of traditional herbal medicines' function in the management of chronic diseases. According to the results, people are somewhat knowledgeable about popular medicinal herbs, but they don't know much about the specifics of how to prepare them or what chemicals are in them. Despite this, there is a widespread belief in the efficacy of herbal treatments, with many people reporting reported improvements in symptom control and general health. People who are well-informed about herbal therapies are more inclined to incorporate them into their routines for managing chronic diseases, according to the research, which also notes that belief and knowledge have a beneficial effect on the frequency of herbal medicine usage. An important consideration that was shown to be highly correlated with the desire to keep taking herbal treatments was the perception of safety. The significance of trust and knowledge in encouraging adherence to traditional therapies is shown by the fact that respondents who believe herbal medicines are safe are more confident in consistently using them. We require educational programs to improve knowledge of herbal medicines' right use, chemical features, and probable interactions since the findings show that they may be a supplementary intervention alongside conventional therapy.

Although herbal medicines are generally well-received and used to a modest degree, the research shows that there is room for improvement in terms of consumers' technical knowledge and their trust in the evidence-based claims made for them. Insights like these may help academics, policymakers, and healthcare providers create plans to include herbal therapies into the management of chronic diseases in a safe and effective way. Traditional herbal medicine has the potential to further contribute to better health outcomes for a wide range of communities with the right kind of standardisation, quality control, and educational backing.

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