

# Patterns and Determinants of Dietary Supplement Use as Complementary and Alternative Treatment Among Hypertensive Adults in a Suburban Community in Laguna Philippines

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## ABSTRACT

Hypertension remains a major public health concern, and many patients use dietary supplements as complementary or alternative medicine due to cultural beliefs, accessibility, affordability, and perceived health benefits. This quantitative descriptive study assessed the practices of hypertensive residents of Bamboo Orchard Subdivision, Brgy. Banay-Banay, Cabuyao City, Laguna, regarding dietary supplement use for hypertension management. Thirty hypertensive adult residents were selected through purposive and snowball sampling. Data were gathered using a researcher-developed and validated questionnaire with acceptable reliability (Cronbach's  $\alpha = 0.778$ ) and analyzed using descriptive statistics, weighted mean, percentage distribution, and Mann-Whitney U test. Findings showed that most respondents were physician-diagnosed, had hypertension for

more than six years, and used supplements together with prescribed antihypertensive medications. Garlic capsules, moringa, and turmeric/curcumin were the most commonly used supplements. Respondents showed a high level of practice in using supplements as complementary treatment and a low level of practice in using them as alternative treatment, with a significant difference between the two practices. The study concludes that dietary supplements are generally used as adjuncts rather than substitutes for prescribed medications, highlighting the need for continued patient education and healthcare guidance.

**Keywords:** *Hypertension, Dietary Supplements, Complementary Medicine, Alternative Medicine, Hypertensive Patients, Philippines*

## INTRODUCTION

Hypertension is a major public health concern and a leading risk factor for cardiovascular diseases, stroke, kidney disease, and premature mortality. Despite the availability of effective pharmacologic therapies, hypertension control remains suboptimal in many populations. Consequently, individuals often seek complementary and alternative approaches to manage their condition.

Complementary and Alternative Medicine (CAM) encompasses a wide range of health practices, products, and systems that are not traditionally part of conventional medicine. Among the most commonly utilized CAM modalities are dietary supplements, including vitamins, minerals, herbal products, and nutraceuticals. These products are frequently perceived as safe, affordable, natural, and culturally acceptable alternatives or adjuncts to conventional therapies.

The World Health Organization advocates the integration of traditional and complementary medicine into healthcare systems while emphasizing the need for research, regulation, and education to ensure safety and efficacy. In the Philippines, the Philippine Institute of Traditional and Alternative Health Care (PITAHC) promotes the integration of CAM within the healthcare system and Universal Health Care framework.

Among hypertensive patients, supplements such as garlic, omega-3 fatty acids, and herbal preparations are commonly used because of their perceived benefits in blood pressure management. However, inappropriate use may result in drug-supplement interactions, inconsistent dosing, adverse effects, and reduced treatment effectiveness.

In Brgy. Banay-Banay, Cabuyao City, Laguna, the coexistence of conventional healthcare and traditional health beliefs creates an environment where dietary supplements are frequently incorporated into hypertension management. Despite this growing practice, localized evidence regarding supplement utilization remains scarce.

This study aimed to determine the practices of hypertensive residents regarding dietary supplement use as complementary or alternative treatment for hypertension, identify commonly used supplements, and evaluate differences in utilization patterns.

## **METHODS**

### **Research Design**

This study utilized a quantitative descriptive research design to describe and analyze the practices of hypertensive residents regarding dietary supplement use as complementary or alternative treatment for hypertension.

### **Study Setting and Participants**

The study was conducted in Bamboo Orchard Subdivision, Brgy. Banay-Banay, Cabuyao City, Laguna. Participants included adult residents aged 18 years and above who were clinically diagnosed with hypertension and currently using dietary supplements.

### **Inclusion Criteria**

Participants were:

- Adults aged 18 years and above;
- Clinically diagnosed with hypertension;
- Residents of Bamboo Orchard Subdivision;
- Users of dietary supplements; and
- Willing to provide informed consent.

### **Exclusion Criteria**

Excluded were:

- Non-residents;
- Acutely ill or bedridden individuals;
- Non-users of dietary supplements;
- Individuals without confirmed hypertension; and
- Those unwilling to participate.

### **Sampling Procedure**

Purposive sampling was initially employed to identify qualified respondents, followed by snowball sampling to recruit additional eligible participants. A total of 30 hypertensive residents participated in the study.

### **Research Instrument**

Data were collected using a researcher-developed questionnaire consisting of:

- Respondent Profile and Hypertension Status
- Types of Dietary Supplements Used

Level of Practice Toward Dietary Supplement Use:

Complementary Treatment Practices

Alternative Treatment Practices

The instrument underwent expert validation and pilot testing. Reliability testing yielded a Cronbach's alpha coefficient of 0.778, indicating acceptable internal consistency.

### Data Collection

Permission was secured from institutional and community authorities prior to data collection. Face-to-face administration of questionnaires was conducted after obtaining informed consent from participants.

### Statistical Analysis

Data were analyzed using:

- Frequency and Percentage Distribution
- Weighted Mean
- Mann-Whitney U Test

A significance level of 0.05 was applied.

## RESULTS AND DISCUSSION

### Demographic Characteristics

Among the 30 respondents, most were aged 60 years and above (33.3%), followed by those aged 40–49 years (30.0%) and 50–59 years (26.7%). Males and females were equally represented (50.0% each).

### Hypertension Profile

All respondents had physician-confirmed hypertension. Most were diagnosed by physicians (86.7%), while a small proportion were diagnosed by nurses or home monitoring (6.7% each). More than half (56.7%) had hypertension for more than six years.

### Dietary Supplement Utilization

Nearly all respondents (96.7%) reported using dietary supplements alongside prescribed antihypertensive medications. Conversely, only 13.3% reported replacing prescribed medications with dietary supplements.

### Commonly Used Dietary Supplements

Table 1. *Commonly Used Dietary Supplements*

| Supplement          | Frequency (%) |
|---------------------|---------------|
| Garlic Capsules     | 40.0          |
| Moringa (Malunggay) | 26.7          |
| Turmeric/Curcumin   | 23.3          |
| Sambong             | 10.0          |
| Ampalaya            | 0             |
| Banaba              | 0             |
| Mangosteen Extract  | 0             |

### Practice Toward Dietary Supplement Use

#### Complementary Use

Respondents demonstrated a high level of practice regarding dietary supplement use as complementary treatment (WM = 3.12, Agree). The highest-rated practice involved discontinuing supplement use when unusual symptoms or side effects occurred (WM = 3.40).

### Alternative Use

Respondents generally disagreed with using dietary supplements as substitutes for prescribed medications (WM = 1.95, Disagree). The lowest-rated practice involved delaying or skipping prescribed antihypertensive medications when supplements were available (WM = 1.43).

### Difference Between Complementary and Alternative Use

The Mann-Whitney U test revealed a statistically significant difference between complementary and alternative treatment practices ( $z = -5.97, p < .001$ ), indicating that respondents were significantly more likely to use dietary supplements as adjunctive rather than substitute therapy.

### Discussion

The findings demonstrate widespread use of dietary supplements among hypertensive individuals, primarily as complementary therapy. The high prevalence of supplement use alongside prescribed medications supports previous reports indicating growing acceptance of CAM among patients with chronic diseases.

Garlic capsules emerged as the most commonly used supplement, reflecting their widespread reputation for cardiovascular benefits. The popularity of moringa and turmeric similarly highlights the influence of cultural familiarity, accessibility, and perceived efficacy in shaping supplement choices.

Importantly, respondents generally exhibited responsible supplement-use practices. Most continued prescribed antihypertensive medications while utilizing supplements as adjunctive therapy, suggesting awareness of the importance of conventional treatment. This finding is encouraging because unsupervised replacement of antihypertensive medications with supplements may increase cardiovascular risk and compromise blood pressure control.

However, reliance on advice from family members, friends, and social media remains evident. Such behavior raises concerns regarding misinformation, inappropriate supplement selection, and potential drug-supplement interactions. Strengthening patient education and healthcare provider engagement is therefore essential.

The significant difference between complementary and alternative use further confirms that participants generally view supplements as supportive rather than replacement therapies. This finding reinforces current hypertension management guidelines that emphasize adherence to prescribed pharmacologic treatment while cautiously incorporating evidence-based complementary interventions.

### CONCLUSION

Dietary supplements are widely utilized among hypertensive residents of Bamboo Orchard Subdivision, Brgy. Banay-Banay, Cabuyao City, Laguna. Garlic, moringa, and turmeric were the most commonly used supplements. Respondents generally demonstrated appropriate practices regarding dietary supplement use as complementary therapy and largely rejected their use as substitutes for prescribed antihypertensive medications.

The study highlights the importance of healthcare provider counseling, patient education, and continued monitoring of supplement use to ensure safe and effective hypertension management.

### Practical Implications

- Pharmacists should routinely inquire about dietary supplement use among hypertensive patients.
- Healthcare providers should counsel patients regarding possible drug-supplement interactions.
- Community health programs should strengthen education on evidence-based use of complementary therapies.
- Public health interventions should reinforce adherence to prescribed antihypertensive medications while promoting informed decision-making regarding dietary supplements.

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