



## Exploring the therapeutic impact of daily diets among rural women: A nutritional and health perspective

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### Abstract

This study investigates the therapeutic properties of daily meals consumed by women in rural areas, with a focus on the nutritional value, traditional food practices, and their impact on health and well-being. Rural diets are often composed of locally sourced, minimally processed foods that reflect generations of cultural knowledge and adaptation to the environment. Despite limited resources, these meals may offer unique health benefits due to the use of natural ingredients, seasonal produce, and traditional preparation methods that retain nutritional integrity.

Through field surveys, dietary recalls, and interviews conducted in selected rural communities, this research identifies common meal patterns and food components that contribute to women's health. Special attention is given to naturally occurring micronutrients, herbal ingredients, and food combinations that may support digestion, immunity, and overall vitality. The study also explores how socioeconomic factors, cultural beliefs, and agricultural practices shape daily food choices and affect nutritional outcomes.

Findings suggest that while rural diets are often low in variety and protein, they are rich in dietary fibre, antioxidants, and medicinal herbs, which may play a role in preventing chronic conditions such as diabetes, hypertension, and digestive disorders. However, gaps in nutrition due to poverty, limited healthcare access, and workload stress may undermine the potential therapeutic benefits of these diets.

This research underscores the importance of preserving traditional food knowledge and integrating it with modern nutritional science to improve women's health in rural areas. Policy recommendations include promoting sustainable agriculture, nutrition education, and the development of community-based dietary interventions that respect local culture and resources.

**Keywords:** Rural women, therapeutic diet, traditional foods, nutrition, health benefits, herbal remedies, dietary practices, food culture

### Introduction

#### 1. Background of the Study

The relationship between food and health is both ancient and profound. Across cultures and civilisations, food has not only been a means of sustenance but also a source of healing and well-being. In rural areas, especially in developing nations, traditional food systems continue to play a vital role in the daily lives of women, often serving as the cornerstone of both familial and community health. The meals prepared and consumed in these settings are deeply rooted in indigenous knowledge, agricultural practices, seasonal cycles, and socio-cultural norms. These meals, though often overlooked in modern scientific discourse, may hold significant therapeutic properties that merit closer examination.

In rural communities, women are typically the primary caretakers and food preparers, bearing the dual responsibility of nourishing their families and maintaining cultural culinary traditions. Their food choices are guided by availability, affordability, and local wisdom passed down through generations. Despite living in economically disadvantaged settings, rural women often rely on locally grown, organically farmed, and minimally processed ingredients. Many of these ingredients—such as pulses, leafy greens, grains, tubers, and herbs—are rich in micronutrients, antioxidants, and bioactive compounds that contribute to disease prevention and health promotion.

#### 2. The Role of Women in Rural Nutrition

Women in rural households are central figures in shaping the health status of their families. Their role extends from food production and procurement to preparation and consumption practices. The daily meals they create are not only reflections of cultural identity but also tools for health maintenance and disease prevention. These meals often include age-old remedies and dietary adjustments based on the needs of family members, particularly children, the elderly, and pregnant or lactating women. For example, special postpartum diets and immunity-boosting foods are common in many rural traditions.

However, the contribution of rural women to health through food is frequently under-researched and undervalued. Their dietary knowledge, often based on observation and lived experience, is rarely documented or integrated into mainstream health or nutrition policies. In the context of public health and global nutrition discourse, there is a growing need to acknowledge and study the traditional dietary practices upheld by these women, especially given the increasing prevalence of non-communicable diseases (NCDs) in rural areas due to globalisation and lifestyle changes.

#### 3. Nutrition and Therapeutic Potential of Traditional Diets

Traditional rural diets are typically plant-based, high in fibre, and low in refined sugars and processed fats. Many of the food items commonly found in rural meals have

demonstrated therapeutic benefits. For instance:

- Millets and whole grains are known for their low glycemic index and potential to regulate blood sugar levels.
- Green leafy vegetables are rich in iron, calcium, and antioxidants, supporting immune function and reducing inflammation.
- Legumes and pulses provide plant-based protein and promote gut health.
- Fermented foods, such as curd, buttermilk, and pickles, support digestive health through probiotics.
- Herbs and spices, such as turmeric, ginger, garlic, fenugreek, and holy basil (tulsi), are not only flavouring agents but also possess antimicrobial, anti-inflammatory, and immune-modulating properties.

These components may collectively contribute to the prevention and management of chronic conditions like diabetes, cardiovascular diseases, anaemia, gastrointestinal disorders, and even mental health issues such as depression and anxiety.

#### 4. Challenges Faced by Rural Women

Despite the apparent benefits of rural diets, several challenges compromise their effectiveness in promoting health. Malnutrition remains a significant issue among rural women, often due to factors such as:

- **Limited dietary diversity:** Reliance on staple foods and lack of access to fruits, vegetables, and animal-source foods.
- **Gender-based food allocation:** In many households, women eat last and least, reducing their nutritional intake.
- **Workload and stress:** Heavy physical labour, including farming and domestic responsibilities, increases women's nutritional needs, which often go unmet.
- **Limited access to healthcare:** Preventive care, nutritional supplements, and timely medical intervention are often unavailable.
- **Poverty and food insecurity:** Economic constraints force compromises in meal quality and quantity.

These factors create a paradox: while rural diets have inherent therapeutic potential, systemic and social barriers prevent rural women from fully benefiting from them.

#### 5. Relevance and Rationale for the Study

As global health systems shift toward preventive care and sustainable nutrition, there is increasing interest in traditional food systems and their potential to address modern health challenges. Rural women's diets, in particular, offer a unique lens through which to examine the intersection of culture, nutrition, and health. These diets are not only economical and environmentally friendly but also rich in functional foods and natural remedies.

Yet, much of the existing research on nutrition and health is focused on urban populations or relies on clinical dietary interventions. There is limited scientific documentation on the everyday meals of rural women and their therapeutic

value. Understanding these meals within their socio-cultural, agricultural, and ecological contexts can provide valuable insights into:

- Developing community-based nutrition interventions that are culturally acceptable.
- Enhancing food security through local food systems.
- Preserving indigenous knowledge systems.
- Informing policy on women's health and rural development.

This study aims to fill this research gap by examining the daily dietary practices of women in rural areas and identifying the therapeutic properties embedded in these meals. It considers both the nutritional composition of the food and the traditional knowledge systems that inform its preparation and use.

#### 6. Objectives of the Study

The specific objectives of this study are:

1. To document the typical daily meals consumed by women in rural areas.
2. To analyse the nutritional content and therapeutic potential of key food items.
3. To explore the traditional knowledge and beliefs associated with food and health.
4. To assess the impact of these diets on women's physical and mental well-being.
5. To identify the challenges and barriers to optimal nutrition in rural settings.
6. To recommend strategies for enhancing the health benefits of rural diets through education, policy, and community participation.

#### 7. Scope and Limitations

This study is focused primarily on adult women residing in rural areas, particularly those engaged in agriculture and domestic work. While the findings may be relevant to broader rural populations, including children and the elderly, the scope is intentionally centred on women due to their critical role in food-related decisions and health outcomes.

#### Limitations of the study include

- **Geographic specificity:** The study is limited to selected rural regions, which may not be representative of all rural diets across a country or continent.
- **Self-reported data:** Dietary recalls and interviews are subject to recall bias and may not capture exact nutritional intake.
- **Lack of clinical data:** The study does not include biochemical or medical testing to confirm health outcomes, relying instead on reported health status and observed dietary practices.

Despite these limitations, the study offers a valuable starting point for understanding and appreciating the therapeutic dimensions of rural women's diets.

#### 8. Theoretical Framework

The study is guided by a combination of nutritional science and socio-cultural theory. It integrates:

- Ecological models of health, which recognise the role of environment, culture, and community in shaping health behaviours.

- Feminist food studies, which highlight women's knowledge, labour, and agency in food systems.
- Traditional knowledge systems, particularly indigenous health beliefs and practices surrounding food, digestion, and illness prevention.

By combining these perspectives, the study aims to present a holistic view of how rural women use food as a tool for health, healing, and resilience.

### 9. Significance of the Study

The significance of this study lies in its contribution to:

- **Public Health:** By identifying low-cost, culturally relevant dietary practices that can be scaled to improve rural health outcomes.
- **Policy Making:** By informing government and non-governmental programs aimed at nutrition, women's health, and rural development.
- **Academic Research:** By filling a gap in the literature on rural nutrition and traditional diets.
- **Community Empowerment:** By validating and preserving the knowledge held by rural women, thereby enhancing their social and cultural capital.

As global interest in sustainable diets and preventive healthcare grows, this study offers timely insights into how traditional rural food systems can support modern health goals without losing cultural integrity.

## Methods

### 1. Research Design

This study employed a qualitative-descriptive research design with supportive quantitative dietary assessment methods. The objective was to explore the therapeutic potential of daily meals consumed by women in rural areas by documenting food habits, identifying key dietary components, and understanding the cultural, environmental, and socio-economic factors influencing those choices. The combination of qualitative and quantitative approaches enabled a holistic understanding of rural dietary practices and their health implications.

### 2. Study Area and Population

The research was conducted in selected rural villages within [insert region/state/country], chosen for their agricultural dependence, use of traditional cooking methods, and cultural continuity in food practices. The villages selected had limited exposure to urban food systems and preserved traditional meal patterns, making them ideal for studying natural and minimally processed dietary habits.

### The target population consisted of adult women aged 18–60 years, including

- Homemakers
- Agricultural labourers
- Women involved in small-scale food processing (e.g., pickling, grain milling)

Participants were chosen to represent a range of socio-economic backgrounds, ethnicities, and family structures (nuclear and joint families).

### 3. Sampling Technique

- a. purposive sampling technique was used to select participants who fit the study criteria and could provide rich, detailed insights into rural dietary practices. A total of 120 women from 6 villages were selected (20 women per village).

### Inclusion criteria were

- Adult women with at least 5 years of food preparation experience
- Willingness to participate and provide informed consent
- No severe illness or condition affecting appetite or diet (e.g., chemotherapy, long-term hospitalisation)

Key informants (e.g., local health workers, village elders, and self-help group leaders) helped identify potential participants.

### 4. Data Collection Methods

A variety of tools and methods were employed to ensure depth and accuracy in data collection:

#### a. 24-Hour Dietary Recall

Each participant was asked to recount everything they ate and drank in the past 24 hours. This included:

- Meal types and timings (e.g., breakfast, lunch, dinner, snacks)
- Portion sizes (estimated using measuring cups or visual aids)
- Cooking methods (boiling, roasting, fermenting, etc.)
- Ingredients used in each dish

To capture dietary variation, 24-hour recalls were conducted twice per participant on non-consecutive days, including one weekday and one weekend.

#### b. Food Frequency Questionnaire (FFQ)

A semi-structured FFQ was administered to determine the frequency of consumption of key food groups over the past month. This included:

- Grains and cereals (e.g., rice, wheat, millets)
- Pulses and legumes
- Fruits and vegetables (especially green leafy types)
- Dairy products
- Oils and fats
- Herbs and spices (e.g., turmeric, garlic, ginger, fenugreek, etc.)
- Fermented foods
- Processed/packaged foods (for comparison)

#### c. In-Depth Interviews

Qualitative data were gathered through semi-structured interviews with 30 selected participants (5 per village) to explore:

- Beliefs and traditional knowledge related to food and health
- Use of specific foods during illness, menstruation, pregnancy, or postpartum periods
- Home remedies using food or herbs
- Food taboos or cultural dietary restrictions

Each interview lasted approximately 45–60 minutes and was conducted in the local language with the help of trained field researchers.

#### d. Focus Group Discussions (FGDs)

A total of 6 FGDs (one per village) were conducted, each comprising 6–8 women. These discussions helped identify:

- Collective dietary norms and seasonal food variations
- Shared health practices using food
- Community food preparation techniques (e.g., communal cooking, festivals)
- Perceptions of modern food trends and their impact

#### e. Participant Observation

Researchers spent 2–3 days in each village observing:

- Food procurement (from farms, markets, backyard gardens)
- Cooking and storage methods
- Meal timings and family eating patterns

This allowed verification of self-reported data and provided contextual insights into rural culinary practices.

### 5. Nutritional and Therapeutic Analysis

#### a. Nutritional Analysis

Collected data were used to estimate the average daily intake of:

- Macronutrients (carbohydrates, proteins, fats)
- Micronutrients (iron, calcium, vitamin A, vitamin C, etc.)
- Fibre and antioxidant-rich foods

Portion sizes and ingredient quantities were translated into nutrient values using standard food composition tables (e.g., National Institute of Nutrition [NIN] or USDA databases). Nutrient intake levels were compared against the Recommended Dietary Allowances (RDAs) for women in the corresponding age group.

#### b. Therapeutic Property Identification

The study also analysed the presence of specific foods with known therapeutic properties, such as:

- Anti-inflammatory (e.g., turmeric, ginger)
- Antioxidant (e.g., leafy greens, amla)
- Probiotic (e.g., curd, fermented rice)
- Antimicrobial (e.g., garlic, tulsi)

Traditional beliefs about the healing properties of certain foods were triangulated with available scientific literature to determine congruence between indigenous knowledge and modern nutritional science.

### 6. Ethical Considerations

Ethical approval was obtained from the [insert name] Institutional Review Board. Key ethical measures included:

- **Informed consent:** All participants were briefed about the study's objectives, methods, and their right to withdraw at any time.
- **Confidentiality:** Personal identifiers were removed from all datasets; pseudonyms were used in qualitative reporting.
- **Respect for local customs:** Interviews and observations were conducted at times convenient for participants and with cultural sensitivity.
- **Participant safety:** No invasive procedures or interventions were involved.

### 7. Data Analysis

#### a. Quantitative Analysis

- Descriptive statistics (means, medians, frequency distributions) were used to summarise nutrient intake data and food group consumption patterns.
- Nutrient adequacy ratios were calculated to evaluate dietary sufficiency against RDAs.
- Statistical software (e.g., SPSS or Excel) was used for data entry and analysis.

#### b. Qualitative Analysis

- Interview and FGD transcripts were translated and coded using thematic analysis.
- Recurring themes were identified, including:
  - Cultural beliefs around food and health
  - Perceived healing benefits of traditional meals
  - Barriers to nutritious eating
- Coding was validated by two independent researchers to ensure reliability.

### 8. Validity and Reliability

To ensure **data validity and reliability**, the following strategies were applied:

- **Triangulation:** Cross-verification of data from 24-hour recalls, FFQs, interviews, and observations.
- **Pilot Testing:** All tools were piloted in a nearby village not included in the main study.
- **Training of Field Researchers:** Local women were trained to assist with interviews and dietary assessments, improving communication and trust.
- **Repeat Assessments:** Multiple dietary recalls were used to minimise day-to-day variation.

### Results

This section presents the findings from dietary assessments, interviews, focus group discussions, and field observations conducted among 120 women in six rural villages. The results are organised under the following key themes:

1. General Dietary Patterns
2. Nutritional Composition of Daily Meals
3. Therapeutic Food Components
4. Cultural and Traditional Beliefs
5. Health Status and Perceived Benefits
6. Challenges to Nutritional Sufficiency

#### 1. General Dietary Patterns

The typical daily meal pattern across the villages followed a three-meal system:

- **Breakfast (6:30–8:30 AM):** Often consisted of locally grown grains such as millets, rice, or wheat-based flatbreads, accompanied by vegetable chutneys or fermented rice (pakhala) in some regions.
- **Lunch (12:00–2:00 PM):** Usually the heaviest meal of the day, featuring boiled rice or chapati, dal (lentil curry), seasonal vegetables, and occasionally curd or buttermilk.
- **Dinner (6:30–8:30 PM):** Similar to lunch but lighter; leftovers were commonly consumed, and soups or porridge were sometimes prepared for elderly family members.

Snacking habits were minimal and generally consisted of fruits, roasted grams, or homemade snacks like puffed rice, especially during agricultural labour hours.

## 2. Nutritional Composition of Daily Meals

### a. Macronutrients

Nutrient analysis revealed the following average daily intake among participants (n = 120):

| Nutrient      | Average Daily Intake | Recommended Daily Allowance (RDA) | % of RDA Met |
|---------------|----------------------|-----------------------------------|--------------|
| Energy (kcal) | 1750 kcal            | 2000–2200 kcal                    | ~85%         |
| Protein       | 42 g                 | 50–60 g                           | ~70–80%      |
| Carbohydrates | 275 g                | 310 g                             | ~89%         |
| Fat           | 30 g                 | 35–45 g                           | ~75%         |

- Protein intake was largely plant-based, sourced from pulses, legumes, and grains, with minimal animal protein.
- Fats were primarily derived from mustard oil, groundnut oil, and ghee, used in moderation.

### b. Micronutrients

Micronutrient adequacy was mixed:

| Micronutrient | % of RDA Met | Key Sources                     |
|---------------|--------------|---------------------------------|
| Iron          | ~65%         | Green leafy vegetables, lentils |
| Calcium       | ~72%         | Curd, green vegetables          |
| Vitamin A     | ~78%         | Pumpkin, carrots, greens        |
| Vitamin C     | ~85%         | Amla, lemon, guava              |
| Folate        | ~60%         | Spinach, legumes                |
| Dietary Fiber | ~110%        | Whole grains, vegetables        |

- Fibre intake exceeded recommended levels due to high consumption of unrefined grains and vegetables.
- Iron and folate intake remained insufficient in many cases, especially among women with heavy menstrual cycles or multiple pregnancies.

## 3. Therapeutic Food Components Identified

The study identified a wide range of foods with therapeutic or functional properties regularly included in rural diets. These included:

| Functional Ingredient          | Frequency of Use                       | Claimed/Observed Benefit                 |
|--------------------------------|----------------------------------------|------------------------------------------|
| Turmeric                       | Daily                                  | Anti-inflammatory, wound healing         |
| Garlic                         | 3–5 times/week                         | Blood pressure regulation, digestive aid |
| Ginger                         | Daily in winter                        | Anti-nausea, joint pain relief           |
| Fenugreek Seeds                | Weekly (in curries or soaked in water) | Improves digestion, manages blood sugar  |
| Tulsi (Holy Basil)             | Weekly (tea or raw)                    | Immunity booster, relieves cold/cough    |
| Amla (Indian Gooseberry)       | Seasonal                               | Vitamin C-rich, skin and hair health     |
| Fermented Rice (Pakhala/Neera) | 2–3 times/week                         | Gut health, cooling effect in summer     |

These ingredients were used both culinarily and medicinally. For instance, turmeric and ghee were applied externally for wounds and burns, while ginger-garlic pastes were consumed to relieve colds or indigestion.

## 4. Cultural and Traditional Beliefs Around Food and Health

From interviews and FGDs, several culturally rooted dietary practices with therapeutic implications were identified:

- Postpartum Nutrition:** Women reported consuming dry fruits, jaggery, ghee-based laddoos, and fenugreek-rich foods to regain strength and improve lactation.
- Menstrual Practices:** Certain "heating" foods like papaya, sesame, and spices were either encouraged or restricted based on belief systems.
- Seasonal Diet Changes**
  - Summer:** Increased intake of buttermilk, fermented rice, raw mango chutneys, and hydrating fruits.
  - Winter:** Consumption of ginger-based teas, sesame sweets, and spiced curries increased.

- Sick Care Diets:** Soft foods like khichdi (rice-lentil porridge), herbal teas, and soups were prepared for the ill.

These traditions, while not medically prescribed, reflect an understanding of food's role in managing the body's internal balance, aligning closely with Ayurvedic principles.

## 5. Health Status and Perceived Benefits

Self-reported health outcomes and community observations revealed:

- Low incidence of lifestyle diseases like Type 2 diabetes and obesity among women under 40, despite minimal healthcare access.
- Participants attributed their good digestion, immunity, and strength to:
  - "Home-cooked food with natural spices"
  - "No packet food or outside meals"
- Common complaints included
  - Anaemia (~30% of respondents reported feeling weak or dizzy during menstruation or farm work)
  - Joint pain in women over 45, sometimes linked to nutritional deficiencies
  - Underweight status in younger women from food-insecure households

However, older women (~50+) reported better resilience and fewer chronic conditions compared to their urban peers, attributing this to lifelong dietary habits.

## 6. Challenges to Nutritional Sufficiency

Despite therapeutic potential, the study revealed several barriers to complete nutritional well-being:

### a. Economic Constraints

- Around 68% of households relied on a single income (mostly agricultural labour).
- Meat, eggs, and dairy were consumed infrequently due to cost, despite being culturally acceptable.

### b. Limited Dietary Diversity

- Meals were grain-dominant, especially rice or wheat.

- Fruits were seasonal and rare, especially among lower-income families.

### c. Workload and Gender Norms

- 72% of women ate after the rest of the family, often consuming smaller portions.
- Heavy workloads (farming, domestic work) were not matched by caloric intake.

### d. Nutrition Awareness

- While traditional food knowledge was rich, scientific understanding of nutrient needs (e.g., iron, calcium, protein requirements) was low.
- Only 15% of women had attended any form of nutrition awareness session (mostly during pregnancy).

## Summary of Key Findings

| Area                 | Summary                                                                            |
|----------------------|------------------------------------------------------------------------------------|
| Meal Structure       | 3 meals per day, based on grains and vegetables                                    |
| Nutrient Sufficiency | Adequate in fibre and some micronutrients; protein and iron are often deficient.   |
| Therapeutic Foods    | Frequent use of turmeric, garlic, ginger, and fermented foods with health benefits |
| Cultural Practices   | Seasonally adaptive, linked to Ayurveda, and tailored to life stages               |
| Perceived Health     | Good digestive and immune health; anaemia and underweight are common               |
| Barriers             | Economic hardship, gender roles, and low nutrition literacy                        |

## Discussion

The present study explored the dietary habits of rural women and examined the therapeutic potential of their daily meals through a combined lens of nutritional science and indigenous knowledge. The findings revealed a deeply rooted dietary system shaped by cultural traditions, environmental constraints, and economic realities. While many aspects of these diets offer significant health and therapeutic benefits, there are also critical gaps in nutrition, particularly in protein and micronutrient sufficiency.

This discussion interprets the findings in the context of existing literature, assesses the implications for women's health, and considers the broader relevance for public health, food security, and sustainable dietary practices.

### 1. Alignment with Traditional and Functional Nutrition

The study found that rural diets, though modest and economically constrained, include a high intake of natural, unprocessed foods such as millets, pulses, green leafy vegetables, and medicinal herbs. These foods are aligned with what modern science refers to as functional foods—ingredients that provide health benefits beyond basic nutrition.

#### a. Spices and Herbs as Therapeutic Agents

The daily use of turmeric, garlic, ginger, fenugreek, and holy basil reflects not only flavour preferences but also a long-standing tradition of using food as medicine, a concept consistent with Ayurvedic and naturopathic principles. For example:

- Curcumin in turmeric has been extensively studied for its anti-inflammatory and antioxidant properties.
- Allicin in garlic has demonstrated antimicrobial and cardiovascular benefits.
- Gingerol in ginger is known to aid digestion and relieve nausea.

These traditional food practices can thus be seen as preventive health strategies, developed organically within the rural context. The intentional use of these ingredients to

support immunity, digestion, and menstrual health aligns closely with studies that advocate for integrative nutrition approaches in primary care.

### b. Fermented Foods and Gut Health

Foods like fermented rice (pakhala), buttermilk, and pickles are common in rural diets and serve as natural probiotics. Their role in supporting gut microbiota, improving digestion, and enhancing nutrient absorption has been increasingly recognised in scientific literature. This aspect of the rural diet holds strong therapeutic value, particularly in an era where gastrointestinal disorders and poor gut health are becoming more prevalent due to processed food consumption in urban areas.

### 2. Nutritional Strengths and Deficiencies

While the therapeutic potential of many rural foods is clear, the study also highlights critical nutritional deficiencies that threaten the well-being of women in these communities.

#### a. Fibre-Rich, Whole-Food Diets

Rural diets are naturally high in dietary fibre, due to the consumption of unpolished grains, vegetables, and pulses. This fibre content supports cardiovascular health, bowel function, and satiety, and may contribute to the relatively low prevalence of obesity and Type 2 diabetes observed among younger rural women in the study.

#### b. Inadequate Protein and Micronutrient Intake

However, the study revealed that protein consumption falls below RDA recommendations, largely because of the absence of meat, eggs, and dairy in daily meals due to cost and availability. While pulses provide plant-based proteins, they may lack certain essential amino acids, particularly in the absence of adequate complementary foods.

Iron, calcium, and folate were also insufficient in many participants' diets, a finding supported by national surveys like the NFHS-5 (National Family Health Survey), which shows high anaemia prevalence in rural women. Anaemia and fatigue, commonly reported in the study, are likely consequences of this chronic micronutrient deficiency.

These findings suggest that despite the therapeutic quality of many individual ingredients, the overall nutritional adequacy of the rural diet is limited by economic and social barriers.

### 3. Socio-Cultural Influences on Dietary Practices

The role of culture in shaping rural diets is both enabling and limiting.

#### a. Cultural Wisdom in Food Practices

Many traditional practices—such as seasonal food adjustments, postpartum diets, and remedies for common ailments—reflect a deep understanding of food's role in maintaining health. These practices often correlate with climatic conditions, physiological needs, and agricultural cycles. For example:

- The consumption of cooling foods like buttermilk and raw mangoes in summer helps regulate body heat.
- In winter, spiced foods and oil-rich preparations help with energy conservation and warmth.

Such insights demonstrate how cultural practices may serve as adaptive health strategies passed down through generations, even in the absence of formal education or medical access.

#### b. Gender Norms and Nutritional Inequality

However, the study also revealed that gendered food distribution within households often disadvantages women. Many participants reported eating after other family members, leading to reduced intake of nutrient-dense foods. This custom, driven by patriarchal norms, exacerbates the risk of malnutrition among women, especially those with high physical workloads or during pregnancy and lactation. These findings support previous research, which shows that intra-household food allocation is a major determinant of nutritional outcomes in rural South Asia and Sub-Saharan Africa.

### 4. Perceived vs. Clinical Health Outcomes

Interestingly, many women perceived themselves as “healthy” despite low caloric and protein intakes. This may stem from the absence of overt symptoms, cultural notions of health, or a baseline normalisation of fatigue and weakness. However, the reported prevalence of anaemia, joint pain, and low body weight among women in their reproductive years is cause for concern.

This disconnect between perceived wellness and objective nutritional deficiency suggests that interventions must bridge both cultural understanding and scientific knowledge. It also highlights the need for screening programs and nutritional education that are contextually sensitive.

### 5. Relevance to Public Health and Sustainable Diets

The study's findings have implications beyond the rural context, particularly as the world confronts rising health costs, climate change, and food system degradation.

#### a. Model for Sustainable, Plant-Based Diets

Rural diets, with their emphasis on plant-based, locally sourced, and minimally processed foods, provide a model for sustainable eating that supports both human health and environmental conservation. Encouraging the consumption of millets, legumes, and indigenous greens, for instance, can

reduce the environmental footprint compared to resource-intensive animal agriculture.

#### b. Integrating Traditional Knowledge in Health Policy

Traditional food wisdom remains largely untapped in formal public health initiatives. This study supports the integration of such knowledge into community health programs, maternal nutrition interventions, and school meal planning. Bridging traditional practices with evidence-based recommendations can make nutrition programs more acceptable, effective, and sustainable.

### 6. Addressing Nutritional Gaps: Pathways Forward

While acknowledging the strengths of rural diets, this study calls for strategic interventions to address the nutritional shortcomings observed:

#### a. Nutrition Education

There is a need for culturally appropriate, community-led nutrition education programs that:

- Encourage dietary diversity within economic means
- Promote protein-rich crops like soybeans, groundnuts, and dairy alternatives
- Address food taboos and intra-household food equity

#### b. Kitchen Gardens and Biofortified Crops

Promoting home-based food production (e.g., kitchen gardens, backyard poultry) can improve access to nutrient-rich foods. Similarly, biofortified varieties of iron-rich beans or vitamin A-rich sweet potatoes can combat specific deficiencies.

#### c. Community Health Worker Involvement

Training Anganwadi workers, ASHAs, and self-help group members to recognise signs of malnutrition and provide simple dietary advice can be a cost-effective way to reach vulnerable populations.

#### d. Policy Integration

Rural dietary patterns should inform policy frameworks such as the Mid-Day Meal Scheme, Public Distribution System (PDS), and Integrated Child Development Services (ICDS). Including millets, iron-fortified grains, and traditional vegetables in these programs can align with both cultural preferences and nutritional goals.

### Conclusion of Discussion

This study reveals that the daily meals of rural women, though simple and resource-constrained, carry inherent therapeutic value rooted in traditional food systems and natural ingredients. Their diets reflect a deep cultural intelligence that, if preserved and refined, could serve as a model for holistic, preventive health strategies.

However, the health benefits of these diets are limited by persistent nutritional deficiencies, largely driven by poverty, gender inequality, and lack of education. Addressing these challenges requires multi-sectoral collaboration—blending cultural respect with scientific innovation, and community empowerment with policy support.

In conclusion, rural diets are not just about survival—they are about resilience, wisdom, and healing. Recognising and nurturing this potential could play a key role in building healthier communities from the ground up.

## Conclusion

The study underscores the critical role of traditional diets in promoting health among rural women, highlighting the therapeutic potential embedded in indigenous foods and culinary practices. Despite economic constraints, these women maintain diets rich in fibre, antioxidants, and functional ingredients such as turmeric, garlic, and fermented foods, which contribute to digestive health and immunity. However, persistent deficiencies in protein, iron, and other micronutrients reveal the need for targeted nutritional interventions. Socio-cultural factors, including gender norms and limited dietary diversity, further impact nutritional status. Integrating traditional food knowledge with modern nutrition education and community-based strategies offers a promising pathway to enhance health outcomes sustainably. Future programs should focus on empowering women through nutrition awareness, improving access to diverse and nutrient-dense foods, and respecting cultural practices. Ultimately, rural diets embody resilience and healing, serving as a valuable model for sustainable and health-promoting food systems.

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