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Review Article

Winter health issues and their remedies from kitchen garden plants

Shweta Kukreti and Rakhee Dimri*

Department of Botany, Dr. P. D. Barthwal Govt. P. G. College, Kotdwar, Pauri Garhwal, Uttarakhand, India

*Email-Id: dimri.rakhi@gmail.com; ORCID: https://orcid.org/0000-0002-9310-7493

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Abstract: Winter brings a host of seasonal health problems such as respiratory infections, digestive disorders, joint pain, and reduced immunity. The use of home-grown medicinal and culinary herbs provides a sustainable, accessible, and effective means of preventing and treating these conditions. This paper highlights common winter health issues and explores the role of kitchen garden plants as natural remedies. Emphasis is placed on their bioactive compounds, therapeutic actions, and health-promoting potential, supporting traditional knowledge and self-reliant healthcare practices.

Keywords: Home-based remedies, medicinal herbs, seasonal health

Introduction

Winter is a season that brings not only a change in climate but also a considerable shift in human health conditions (Kinney et al., 2015). The fall in temperature, reduced sunlight exposure, and increased susceptibility to infections contribute to a rise in seasonal ailments such as cold, cough, sore throat, respiratory congestion, joint pain, and digestive disturbances (Mourtzoukou and Falagas, 2007). These health problems are often aggravated by poor dietary habits and low physical activity during the colder months (Hansen et al., 2020). While modern medicine offers symptomatic relief, dependence on synthetic drugs can have undesirable side effects and high costs, especially in rural and resource-limited communities. Thus, there is an increasing interest in exploring safe, affordable, and eco-friendly alternatives derived from natural sources (Nyakudya et al., 2020). In traditional Indian households, kitchen gardens have long been an integral part of daily life, providing both nutritional and medicinal benefits. These small home-based gardens, rich in herbs and spices such as *Ocimum sanctum*, *Zingiber officinale*, *Curcuma longa*, and *Allium sativum*, serve as the first line of defense against

common winter ailments (Roy et al., 2022). The bioactive compounds present in these plants such as curcumin, eugenol, gingerol, and allicin exhibit antimicrobial, anti-inflammatory, and immune-boosting properties (Ajanaku et al., 2022). Their regular use in food and home remedies helps maintain good health naturally, reflecting the deep-rooted wisdom of traditional Indian medicine systems like Ayurveda (Sheikh et al., 2023). The present work holds significance as it systematically documents winter health issues and correlates them with readily available kitchen garden plants as potential remedies. By compiling scientific and ethnobotanical information, this study bridges the gap between traditional knowledge and modern research. Promoting the use of kitchen garden plants not only enhances community health and self-reliance but also encourages biodiversity conservation and sustainable living. In this way, the study contributes to holistic healthcare by emphasizing preventive practices rooted in local and accessible plant resources.

Methodology

A comprehensive literature survey was conducted to gather information on common winter health problems and their plant-based remedies from kitchen gardens. Relevant scientific papers, review articles, and ethnobotanical reports were collected from reputed databases such as Google Scholar, ScienceDirect, PubMed, and ResearchGate. The keywords used included winter ailments, kitchen garden plants, herbal remedies, and traditional medicine (Kumar, 2025). Publications from 2010 to 2025 were primarily considered to ensure updated and credible information. The findings were then organized into two comprehensive tables summarizing health problems and corresponding kitchen garden remedies, integrating both traditional practices and scientific validation (Jena et al., 2025).

Results and discussion

The literature survey revealed that several health problems such as cold, cough, sore throat, respiratory congestion, indigestion, joint pain, and skin dryness are highly prevalent during winter. These conditions are primarily linked to decreased immunity, low humidity, and reduced physical activity. The analysis identified a strong correlation between these seasonal ailments and the preventive potential of commonly available kitchen garden plants. As presented in Table 1, the major winter-related health issues are well-documented in previous studies, highlighting their widespread occurrence and environmental association. Table 2 further demonstrates that kitchen garden plants like *Tulsi*, *Ginger*, *Turmeric*, *Garlic*, *Mint*, and *Lemon* possess potent bioactive compounds such as eugenol, gingerol, curcumin, allicin, and vitamin C that play a vital role in mitigating these ailments through antimicrobial, antioxidant, and anti-inflammatory mechanisms. The graph shows that Tulsi and Garlic exhibit the highest number of major health benefits, mainly due to their strong antiviral, antimicrobial, and immune-boosting actions. Ginger and Turmeric follow closely, known for their anti-inflammatory and digestive properties, which are particularly beneficial during winter. Lemon and Mint contribute to respiratory and digestive health, while Fenugreek and Aloe Vera are effective for metabolic balance and skin care (Figure 1). The discussion of findings emphasizes that the regular use of these plants, either as food ingredients or home remedies, can significantly enhance immunity and overall well-being during winter. The integration of traditional ethnomedicinal practices with modern scientific validation strengthens the

relevance of kitchen garden herbs in sustainable healthcare. Moreover, promoting their cultivation supports nutritional security, biodiversity conservation, and self-reliant community health systems. Thus, the study underscores that kitchen garden plants serve not only as curative agents for winter ailments but also as preventive tools that align with holistic and eco-friendly health management.

Table 1: Common health problems during winter

Common Health Issue	Causes	Source
Common cold and cough	Caused by viral infections, often aggravated by low humidity and exposure to cold winds.	Guarnieri et al., (2023).
Sore throat and tonsillitis	Frequent due to dry air and fluctuating indoor temperatures.	Renner et al., (2012).
Respiratory congestion and asthma	Triggered by dust, pollution, and cold air, leading to breathing difficulties.	D'Amato et al., (2018).
Indigestion and constipation	Reduced physical activity and heavy diets slow down metabolism.	Tantawy et al., (2017); Wang et al., (2025).
Joint and muscle pain	Cold weather reduces circulation, worsening arthritis and rheumatic conditions.	Kim et al., (2024).
Skin dryness and cracking	Caused by low humidity and reduced sebum secretion.	Endly and Miller, (2017).
Low immunity and fatigue	Decreased vitamin D synthesis and poor dietary diversity lower resistance to infections.	Di Molfetta et al., (2024).

Table 2: Kitchen garden plants as winter remedies

Plant Name	Scientific Name	Parts Used	Bioactive compounds	Health Benefits
Aloe Vera	*Aloe barbadensis*	Leaf gel	Aloin Boudreau et al., (2017)	Moisturizes dry skin and supports digestion.

Black Pepper	*Piper nigrum*	Fruits	Piperine Srinivasan, (2007)	Improves bioavailability of nutrients and relieves cough.
Coriander	*Coriandrum sativum*	Leaves & seeds	Linalool Scandar et al., (2023)	Enhances digestion, relieves gas and bloating.
Fenugreek	*Trigonella foenum-graecum*	Seeds & leaves	Trigonelline Visuvanathan et al., (2022)	Reduces joint pain and aids in sugar metabolism.
Garlic	*Allium sativum*	Bulbs	Allicin Borlinghaus et al., (2014)	Antimicrobial, reduces cholesterol and strengthens immunity.
Ginger	*Zingiber officinale*	Rhizomes	Gingerol Bischoff-Kont and Fürst, (2021)	Improves digestion and relieves sore throat and cold.
Lemon	*Citrus limon*	Fruits	Vitamin C Budiarto et al., (2024)	Strengthens immunity and detoxifies body.
Mint	*Mentha arvensis*	Leaves	Menthol Kazemi et al., (2025)	Relieves nasal congestion and aids digestion.
Tulsi	*Ocimum sanctum*	Leaves	Eugenol Paidi et al., (2021)	Antiviral, relieves cold, cough and bronchitis.
Turmeric	*Curcuma longa*	Rhizomes	Curcumin Hewlings and Kalman, (2017)	Anti-inflammatory, boosts immunity and soothes joints.

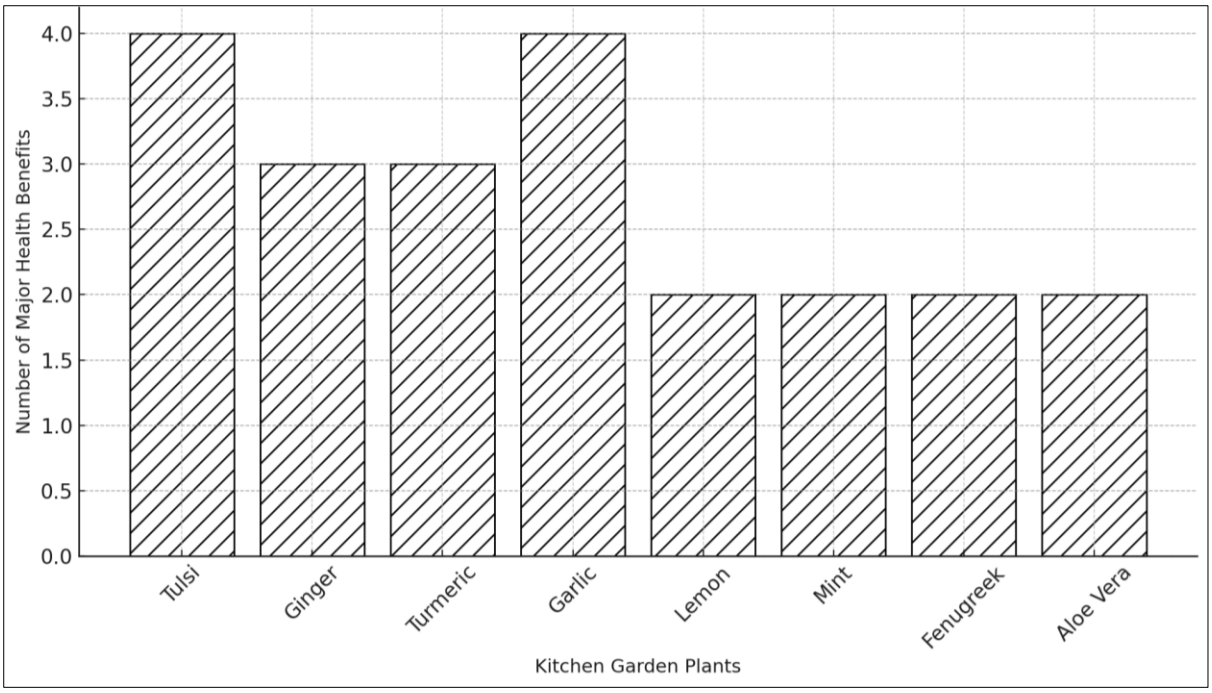

Figure 1: Major health benefits of common kitchen garden plants used as winter remedies

Conclusion

The study concludes that winter health issues such as cold, cough, respiratory congestion, digestive discomfort, and joint pain can be effectively managed using kitchen garden plants rich in bioactive compounds. These plants, including tulsi, ginger, turmeric, garlic, and lemon serve as natural, accessible, and affordable remedies that enhance immunity and overall well-being. Integrating such herbs into daily diets and home remedies not only provides preventive and curative health benefits but also promotes sustainable living and self-reliant healthcare practices. Encouraging the cultivation and utilization of these medicinal plants in household gardens thus represents a holistic approach to maintaining seasonal health, preserving traditional knowledge, and supporting environmental sustainability.

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