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Traditional Use of Phaki for Digestive Problems: A Comparative Study Across Localities of District Abbottabad

Dr. Adeela Bibi
Lecturer Botany, Government Postgraduate College for Women Mandian, Abbottabad, Pakistan. Corresponding Author Email: adeelabibi4@gmail.com
Dr. Wajid Ali
Hazara University, Mansehra

Author Details

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Corresponding E-mail & Authors*:

Abstract

Traditional herbal remedy plays a vital role in primary healthcare systems, particularly in rural communities. Phaki is a locally used in various localities of District Abbottabad, Pakistan, widely known for its effectiveness in treating digestive ailments. This study aims to document and compare the traditional uses of Phaki for digestive problems across different localities of District Abbottabad, highlighting variations in indigenous knowledge and practices. Ethnobotanical data were collected through semi-structured interviews, questionnaires, and group discussions with local healers, elders and community members from selected areas. The findings reveal that Phaki is commonly used to treat stomach pain, indigestion and gas-related disorders. Preparation methods varied among localities, including powders and direct consumption, with differences in dosage and frequency of use. Despite these variations, a strong consensus exists regarding its effectiveness and safety. The comparative analysis indicates that geographical, cultural, and socio-economic factors influence local knowledge and usage patterns. This study underscores the importance of preserving traditional ethno medicinal knowledge and suggests that Phaki holds significant potential for further pharmacological and phytochemical research. Proper documentation of such indigenous practices may contribute to sustainable healthcare solutions and the conservation of medicinal plant resources in the region.

Keyword: Ethnomedicinal, Phaki, Digestive Problems, Traditional, Local

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INTRODUCTION

Traditional medicinal practices play a crucial role in primary healthcare systems, particularly in rural and mountainous regions where access to modern medical facilities is limited. In Pakistan, the reliance on indigenous knowledge of medicinal plants has persisted for centuries, forming an integral part of local culture and daily life (Gilani, *et al*, 1994). These traditional remedies are often passed down orally through generations and are deeply embedded in community beliefs and ecological understanding (Shinwari, & Qaiser, 2011). Among the various health concerns addressed through ethno medicine, digestive disorders remain one of the most commonly treated ailments due to their frequent occurrence and strong association with diet, lifestyle and environmental conditions(Ahmed, *et al*,.2013). Phaki, is a traditional herbal preparation widely used in the Hazara region of Khyber Pakhtunkhwa, holds significant importance in the treatment of digestive problems such as indigestion, abdominal pain, constipation, and acidity. Typically prepared from locally available medicinal plants, Phaki is consumed in powdered form and is valued for its perceived effectiveness, affordability, and minimal side effects. Despite its widespread use, scientific documentation of Phaki remains limited, and variations in its composition, preparation methods, and therapeutic applications across different localities are not well recorded. Understanding these variations is essential for preserving indigenous knowledge and evaluating the potential pharmacological value of traditional formulations. This study aims to document and compare the traditional use of Phaki for digestive problems across selected localities of District Abbottabad. By examining differences and similarities in plant ingredients, preparation techniques, and usage patterns, the research seeks to highlight the cultural and medicinal significance of Phaki within local communities. Additionally, this comparative approach contributes to ethnobotanical literature and supports future efforts toward conservation, standardization, and possible integration of traditional remedies into broader healthcare frameworks (Gilani, et al,. 1994: Shinwari, & Qaiser, 2011). Herbal medicine is still the mainstay of about 75–80% of the world population, mainly in the developing countries, for primary health care because of better cultural acceptability, better compatibility with the human body, and lesser side effects (Kamraj 2000). Allophathic and homophathic directly or indirectly depend upon the herbal plants

for preparation of certain synthetic drugs (Shahani et al, 1989). The ingredients which are used in this phaki are discussed below.

Punica granatum *L.* **(Local name Anardana)**

Punica granatum, known as pomegranate, is broadly recognized for its medicinal properties (Fig 1.1). Anardana (local name) refers to the dried seeds of pomegranate, which are commonly used as a spice and traditional remedy. These seeds are rich in polyphenols, tannins and antioxidants. The consumption of pomegranate seeds has been associated with several health benefits including antioxidant and anti-inflammatory. The dried seeds are commonly used to improve digestion, treat diarrhea, and stimulate appetite. Moreover, pomegranate extracts have been reported to possess antimicrobial activities (Jurenka, 2008).

Piper nigrum *L.* **(Local name Kali mirch)**

Piper nigrum, commonly known as black pepper, is one of the most usually used spices in the world (Fig 1.2). Its major bioactive compound is piperine, which is responsible for its spicy taste and therapeutic properties. Black pepper has significant antioxidant, anti-inflammatory, and antimicrobial activities. Piperine enhances the bioavailability of many nutrients and drugs by improving their absorption in the body. Black pepper is also used to treat digestive disorders, respiratory conditions, and metabolic diseases (Srinivasan, 2007).

Pimpinella stewartii *(Dun.)* **(Local name Tarphaki)**

Pimpinella stewartii, locally known as tarphaki, is a medicinal plant belonging to the *Apiaceae* family (Fig 1.3). The inflorescence and seeds of this plant are traditionally used in herbal medicine for treating gastrointestinal disorders. It contains essential oils and phenolic compounds that contribute to its antimicrobial and antioxidant properties. The plant has been traditionally used as a digestive stimulant and carminative to relieve gas, indigestion, and abdominal discomfort. Studies suggest that species of the genus *Pimpinella* possess anti-inflammatory and antimicrobial activities, making them useful in treating inflammatory conditions (Rather et al., 2016).

Trachyspermum ammi **(Ajwain)**

Trachyspermum ammi, generally known as ajwain, belongs to the *Apiaceae* family and is widely used in traditional medicine (Fig 1.4).The fruits (seeds) contain thymol, a

compound responsible for its strong aroma and medicinal properties. Ajwain is used as a digestive aid and carminative. It helps relieve indigestion, bloating, and stomach pain. It has also been used to treat respiratory conditions such as cough and asthma (Bairwa et al., 2012).

Black Salt **(Local name Kala namak)**

Black salt, also known as Kala namak, is a mineral salt commonly used in South Asian food and traditional medicine (Fig 1.5).It contains various minerals including iron, potassium, magnesium, and sulfur compounds that contribute to its characteristic taste and medicinal properties. Black salt is commonly used to improve digestion and relieve in acidity. It acts as a mild laxative and is often included in traditional digestive formulations. The presence of sulfur compounds may also contribute to its detoxifying and digestive benefits (Peter, 2012).

Nigella sativa *L.* **(Kalonji)**

Nigella sativa, generally known as black seed or kalonji, has been used for centuries in traditional medicine (Fig 1.6). The seeds contain bioactive compounds such as thymoquinone and nigellidine which contribute to its therapeutic effects. Kalonji is widely known for its antioxidant, anti-inflammatory, and antimicrobial properties. It has been used usually for treating respiratory diseases, diabetes, and digestive disorders. Research indicates that thymoquinone plays a significant role in reducing oxidative stress and inflammation in the body (Ahmad et al., 2013).

Zanthoxylum armatum *DC.* **(Local name Timur)**

Zanthoxylum armatum, commonly called timur, is used in traditional medicine across South Asia (Fig 1.7). The fruits contain essential oils, alkaloids, and flavonoids that contribute to their medicinal properties. Timur is traditionally used for dental problems such as toothache due to its analgesic and antibacterial effects. It also possesses anti-inflammatory and digestive properties. The fruits are used to stimulate appetite and treat gastrointestinal disorders. Additionally, extracts of *Zanthoxylum armatum* have shown antimicrobial and antioxidant activities (Singh & Singh, 2011).

Foeniculum vulgare *Mill.* **(Local name Saunf)**

Foeniculum vulgare, usually known as fennel or saunf, is an aromatic medicinal plant belonging to the *Apiaceae* family (Fig 1.8). The seeds contain essential oils such as

anethole and fenchone. Fennel is widely used as a digestive aid and carminative. It helps relieve indigestion, and stomach cramps. Furthermore, fennel possesses antioxidant, antimicrobial, and anti-inflammatory properties. It has also been used traditionally to improve lactation in nursing mothers and relieve respiratory disorders (Rather et al., 2016).

Mentha arvensis *L.* **(Local name Podina)**

Mentha arvensis, known as mint or podina, belongs to the family *Lamiaceae* (Fig 1.9). It is generally used in herbal medicine due to its aromatic oils and pharmacologically active compounds such as menthol and flavonoids. The leaves of *Mentha arvensis* are used to treat digestive disorders, nausea, and flatulence. Menthol, the major component of mint oil, exhibits antispasmodic, analgesic, and antimicrobial properties (Bhat et al., 2018). Mint extracts also show antioxidant and antibacterial activities against several pathogenic microorganisms. Moreover, mint tea is frequently used as a natural remedy for indigestion, stomach cramps, and respiratory problems. The soothing effect of menthol makes it valuable for relieving headaches and nasal congestion (Shahrajabian et al., 2020).

Objectives of the Study

1. To record how local people in different areas of District Abbottabad traditionally use *Phaki* for digestive problems.
2. To find out which digestive diseases are treated with *Phaki* and how it is prepared and used by local healers and households.
3. To compare the knowledge, use and cultural importance of *Phaki* among different local communities of District Abbottabad.

Material and Methods

Local people of District Abbottabad were interviewed during September 2025 to January 2026 to learn about the traditional uses of *Phaki* for digestive problems. First, an inventory interview was conducted in which villagers and local healers from different areas of District Abbottabad were shown plant samples and asked about their medicinal uses. After that, detailed information about these plants was collected from various localities of the district Abbottabad. During group discussions, villagers were asked about *Phaki* for digestive problems, and how it is prepared and used. The participants

shared their knowledge about Phaki, their uses, and traditional practices. For the preparation of this *phaki* (traditional powder), dried leaves, fruits, inflorescence and seeds of different plants were collected. All materials were clean and free from dust. The ingredients included dried leaves of *Mentha arvensis L.* (podina) 4 tablespoons, inflorescence of *Pimpinella stewartii (Dun)* (tarphaki) 3 tablespoons, seeds of *Punica granatum L.*(anardana) 4 tablespoons and *Nigella sativa L.* (kalonji) 4 tablespoons, fruits of *Trachyspermum ammi L.*(ajwain) 4 tablespoons, *Zanthoxylum armatum DC.* (timur) 4 tablespoons, *Piper nigrum L.* (black pepper) 3 tablespoons, *Foeniculum vulgare Mill.* (saunf) 4 tablespoons, and black salt (2 tablespoons). Each ingredient was grinded separately into a fine powder using an electric grinder. All the powdered ingredients were then mixed well in a clean, dry bowl to ensure even mixing. The final mixture was stored in an airtight container to protect it from moisture and to maintain its strength. This powder (phaki) is traditionally used as a digestive aid. All the powdered ingredients are available at Fig 2.1 to 2.8.

Result & Discussion

The herbal formulation known as Phaki (Phakki) is widely used in traditional South Asian and Unani medicine as a natural remedy for promoting digestive health and lessening common stomach disorders. In rural and traditional communities of District Abbottabad, phakki is commonly used as a digestive aid and stomach remedy. This preparation typically consists of a mixture of different medicinal herbs and spices. The grinded ingredients included in phakki like ajwain, black pepper, podina, timur, saunf, tarphaki, kalonji, anardana and black salt have long been recognized in traditional medicine for their digestive and stomach-soothing properties. After grinding all the powdered ingredients were then mixed well in a clean and dry bowl. The final mixture (phaki) was stored in an airtight container to protect it from moisture and to maintain its strength. This powder is traditionally used as a digestive aid. It is usually consumed with water after meals to balance the effects of heavy or oily foods, reduce gas formation, and relieve mild constipation. The findings of the present study are consistent with previous research. For instance, Londonkar and Poddar (2009) reported that *Mentha arvensis* L. possesses significant medicinal properties. Their study on various extracts of *Mentha arvensis* against drug-induced gastric ulcers in mammals demonstrated that the plant

has carminative and anti-peptic ulcer activities and is traditionally used to treat indigestion. Similarly, ajwain (*Trachyspermum ammi L.*) seeds are widely used in South Asian cultures for improving digestion and reducing gas formation. These seeds contain thybudimol and other volatile oils that exhibit carminative and antispasmodic properties, which may help relieve indigestion and gastrointestinal discomfort (Shaikh et al., 2025). Black pepper (*Piper nigrum L.*) is another important ingredient in phakki. It contains the alkaloid piperine, which has been reported to stimulate pancreatic and intestinal digestive enzymes. This activity enhances digestive capacity and reduces gastrointestinal transit time in experimental studies, supporting the traditional use of black pepper as a digestive stimulant (Srinivasan, 2007). Kalonji (*Nigella sativa L.*) seeds are also widely used in Unani medicine for the treatment of gastrointestinal disorders. Previous studies have highlighted their gastro protective, antidiarrheal, and appetite-stimulating properties, which contribute to improved digestive health (Rasheed, Tariq, & Siddiqui, 2024). Similarly, saunf (fennel) has a long history of use in managing digestive problems such as indigestion, gas, and bloating. Ethnomedicinal surveys conducted in Pakistan have documented its use for dyspepsia and gastric colic, supporting its traditional role in digestive remedies (Tariq et al., 2015). Our results are agreed with (Zhicen L., 1987) who stated that *Punica granatum L.*seeds are widely used worldwide to help digestion and a vermifugal agent. Stover (2007) reported similar findings that pomegranate parts, sometimes in combination with other ingredients, for stomach diseases, mouth and genital sores. Bhattacharjee, et al (2019) reported similar findings that powder of *Zanthoxylum armatum* along with *Mentha longifolia* dried leaves, *Trachyspermum ammi* seeds and black salt is taken with water during cholera and indigestion. Thokchom and Okram (2011) also stated that the fruit of *Zanthoxylum armatum DC* are employed as an aromatic tonic in fever and indigestion. Our results are agreed with Afzal (2009) who stated that *Pimpenella stewartii (Dun)* is found in almost all areas of Hazara division and its fruits are used as carminative and for treatment of other stomach diseases.The maximum people of the area told during the formal discussion and interviews that digestive diseases are treated with Phaki. Local people also told that the Phaki has cultural importance among different local communities of District Abbottabad.

1. PICTURES OF INGREDIENTS BEFORE GRINDING

Fig 1.1 *Punica granatum L.* (Anardana)

Fig 1.2. *Piper nigrum L.* (Black pepper)

Fig 1.3 *Pimpinella stewartii (Dun.)* (Tarbhaki)

Fig 1.4 *Trachyspermum ammi* (ajwain)

Fig 1.5 black salts

Fig .1.6 *Nigella sativa L.* (Kalonji)

Fig 1.7 *Zanthoxylum armatum DC.* (timur)

Fig 1.8 *Foeniculum vulgare Mill.* (saunf)

Fig 1.9 *Mentha arvensis L.* (podina}

2. PICTURES OF INGREDIENTS AFTER GRINDING

Fig 2.1 *Punica granatum L.* (Anardana)

Fig 2.2 Piper nigrum *L.* (Black pepper)

Fig 2.3 *Pimpinella stewartii (Dun.)* (Tarbhaki)

Fig 2.4 *Trachyspermum ammi* (ajwain)

Fig 2.5 *Nigella sativa L.* (Kalonji)

Fig 2.6 *Zanthoxylum armatum DC.* (timur)

Fig 2.7 *Foeniculum vulgare Mill.* (saunf)

Fig 2.8 *Mentha arvensis L.* (podina}

Note. The scholar declares no conflict of interest.

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