



(RESEARCH ARTICLE)



# The role of knowledge transfer in the sustainability of herbal medicine practices in Bangladesh

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## Abstract

**Background:** Herbal medicine practices in Bangladesh face sustainability challenges due to insufficient knowledge transfer mechanisms. This study examines how herbal practitioners transfer knowledge within families and communities, the challenges and opportunities in this process, and the role of effective knowledge transfer in sustaining these practices.

**Methods:** Semi-structured interviews were conducted with ten herbal practitioners from diverse backgrounds. Data were analyzed qualitatively to identify themes related to knowledge transfer processes, barriers, and sustainability.

**Results:** Practitioners primarily transfer knowledge through familial inheritance, direct observation, and informal teaching. Challenges include economic constraints, lack of documentation, reduced interest among younger generations, and inconsistent institutional support. Opportunities identified include leveraging online platforms, fostering cooperative learning, and formalizing apprenticeship models. Effective knowledge transfer was linked to the longevity and adaptation of practices, ensuring their relevance in modern healthcare.

**Conclusion:** Strengthening knowledge-sharing mechanisms is vital for preserving and sustaining herbal medicine practices in Bangladesh. Integrating traditional methods with modern tools and structured training can enhance sustainability and promote the practice's evolution.

**Keywords:** Knowledge transfer; Herbal medicine; Herbal practitioners; Bangladesh

## 1. Introduction

Herbal medicine has been an integral part of healthcare systems worldwide, particularly in regions like Bangladesh, where it holds cultural, historical, and therapeutic significance (Ghani A, 2016). Rooted in centuries-old traditions, herbal medicine is sustained by the transfer of knowledge through families and communities (Thillaivanan S, Samraj KC, 2014). This process relies on oral traditions, hands-on learning, and mentorship, which ensure that critical knowledge about herbal remedies, their preparation, and their application is preserved across generations (Etkin & Ross, 1982). However, as Bangladesh undergoes rapid modernization, traditional practices face numerous challenges, including generational knowledge gaps, misinformation, and a lack of formal recognition and regulatory support (Rahman et al., 2021). Knowledge transfer mechanisms are central to the survival and sustainability of herbal medicine (Abu Jafor Mohammad Obaidullah, 2018). In Bangladesh, these include family-centered teaching, community-based sharing, and practical mentorship, where skills are imparted through direct observation and practice. Such informal systems of learning have enabled the continuity of herbal medicine in the absence of formal education systems (Gessler et al.,

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1995). However, as younger generations increasingly pursue alternative professions and urbanization disrupts traditional social structures, the preservation of this knowledge is at risk. Additionally, public mistrust stemming from unregulated practices and misinformation further undermines the credibility and sustainability of herbal medicine (Bodeker & Kronenberg, 2002).

Despite these challenges, there are opportunities to revitalize herbal medicine practices. Growing global interest in natural and traditional remedies offers a platform to integrate these practices into mainstream healthcare systems (Mohammad AM, 2010). Digital tools and online learning platforms provide avenues for practitioners to document, share, and expand their knowledge (Martins Ekor, 2014). Furthermore, structured mentorship programs and formal certifications can enhance the credibility and legitimacy of herbal medicine, encouraging greater acceptance among the public and younger generations (World Health Organization, 2019). This study examines the mechanisms, challenges, and opportunities in knowledge transfer among herbal medicine practitioners in Bangladesh. Understanding these dynamics is critical for preserving this valuable tradition and ensuring its long-term sustainability in the face of modern challenges and opportunities.

### 1.1. Research Questions

- How do herbal practitioners in Bangladesh transfer knowledge within their community or family?
- What are the challenges and opportunities in knowledge transfer among herbal medicine practitioners in Bangladesh?
- How does effective knowledge transfer contribute to the sustainability of herbal medicine practices?

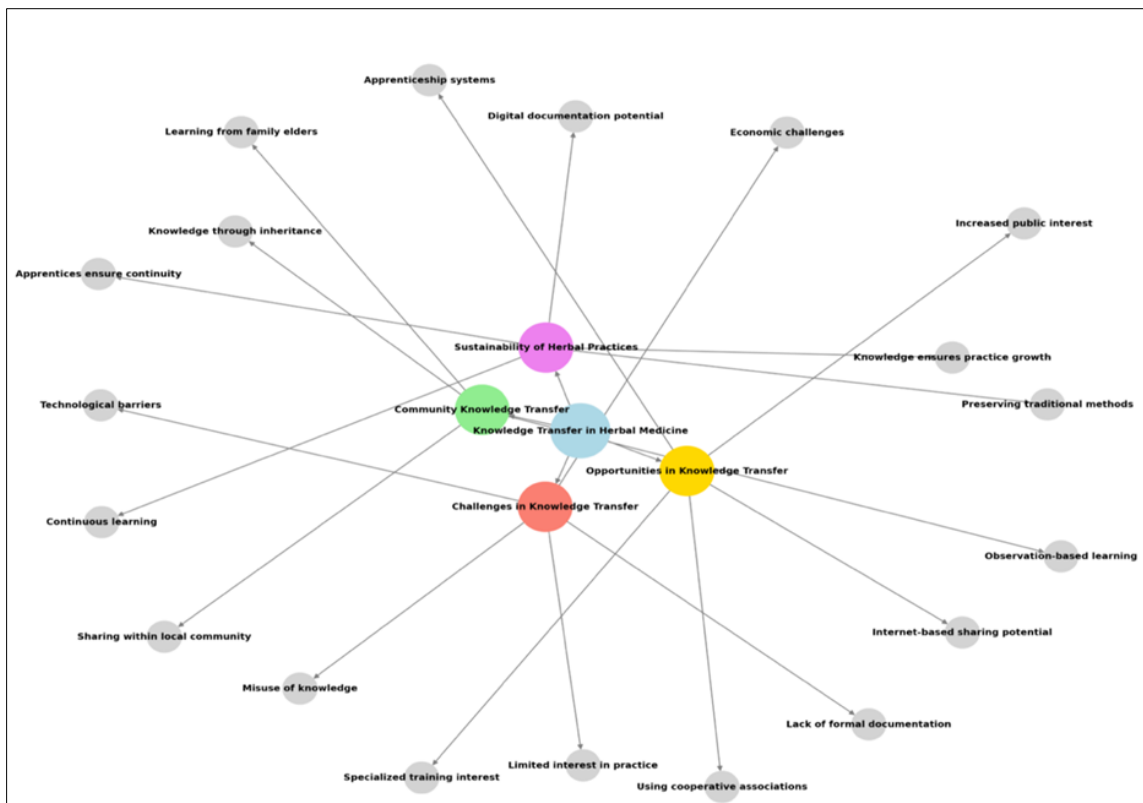


Figure 1 Conceptual Map – Knowledge Transfer in Herbal Medicine Practices

## 2. Research Methodology

### 2.1. Research Design

The study adopts a **qualitative exploratory design**, aiming to understand the processes, challenges, and opportunities related to knowledge transfer among herbal practitioners. This design is suitable for exploring complex social and cultural phenomena, such as the transmission of traditional knowledge in herbal medicine practices.

## 2.2. Data Collection Methods

We have used **semi-structured interviews** to collect the primary data from the herbal practitioners. Semi-structured interviews allow for flexibility while maintaining a focus on the research objectives. The data includes rich, descriptive insights into the experiences of participants, which aligns with the study's qualitative nature.

**Participants:** 10 participants have been selected using a purposive sampling strategy, where participants were selected based on their expertise and involvement in herbal medicine practices.

## 2.3. Data Analysis

To analyse the data, we have used a **thematic analysis** approach and Microsoft excel and Nvivo softwares have been used to analyze the data. This approach helps to structure the findings in a meaningful way, offering insights into how knowledge transfer functions within this context.

## 2.4. Sampling Strategy

- We have utilized a **purposive sampling** technique, selecting participants who are:
- Actively engaged in herbal medicine practices.
- Representing diverse perspectives (e.g., practitioners from different communities or generations).
- This ensures that the data is rich and representative of the study's objectives.

## 2.5. Context and Setting

The study is contextualized in Bangladesh, where herbal medicine has cultural and historical significance. The data reflects insights specific to this geographical and cultural setting, with themes related to family traditions, community learning, and mentorship.

## 3. Results

This analysis of the data revealed several key themes. Firstly, Knowledge Transfer within community or family, Secondly, Challenges & Opportunities in Knowledge Transfer, Thirdly, contribution of knowledge transfer in the sustainability of herbal medicine practices.

**Table 1** Knowledge Transfer within community or family

Themes	Subthemes
Family Legacy and Tradition	1. Family practice passed down (P02) 2. Learning from parents (P10) 3. Generational knowledge transfer(02)
Community-Based Knowledge Sharing	1. Sharing knowledge with peers(P03) 2. Informal community learning(P10) 3. Collaborative knowledge exchange(03 &07)
Peer Influence and Mentorship	1. Learning from experienced practitioners(P02) 2. Mentorship by friends(P04) 3. Influence of senior practitioners(P04)
Hands-On Learning and Practice	1. Practical knowledge transfer (P06) 2. Direct involvement in preparation (05) 3. On-the-job learning (P06)

Limited Family Involvement	<ol style="list-style-type: none"> <li>1. Family members in other professions(P09)</li> <li>2. Lack of family interest in practice(P10)</li> </ol>

### 3.1. Family Legacy and Tradition

Many herbal practitioners in Bangladesh receive their knowledge as part of a family tradition, passed down through generations. This knowledge transfer happens informally within the family structure. For example, participants like P02 and P10 reported learning from their fathers or grandparents, indicating that the practice is deeply rooted in family heritage. The knowledge is often shared through direct teaching, where older family members instruct the younger ones in the preparation and application of herbal remedies. In this context, knowledge transfer is seen as a continuous and generational process, with practitioners inheriting not only the skills but also the values and ethos surrounding the practice.

### 3.2. Community-Based Knowledge Sharing

In addition to familial knowledge transfer, community-based sharing plays a significant role. For instance, participant 03 highlighted sharing knowledge with peers, while participant 10 mentioned the influence of other practitioners, such as hakim, who would come to learn from his experiences. This suggests that knowledge sharing occurs within a broader community setting, where practitioners exchange information informally. These interactions often take place through discussions, collaborations, or casual meetings, reflecting a community-oriented learning culture. The emphasis on word-of-mouth, discussions during local gatherings, and interactions in informal settings shows that knowledge is often passed on through social networks within the practitioner community.

### 3.3. Peer Influence and Mentorship

Mentorship, both formal and informal, plays a crucial role in knowledge transfer among herbal practitioners in Bangladesh. Many participants, such as P02 and P04, mention receiving guidance and mentorship from experienced practitioners or senior members of the community. This mentorship is not restricted to family members but extends to peers within the herbal medicine community. Through direct mentoring, practitioners gain deeper insights into their craft, including preparation techniques, patient consultations, and the ethical dimensions of herbal medicine. This form of knowledge transfer ensures that practical and nuanced knowledge is effectively conveyed from one generation or peer group to another.

### 3.4. Hands-On Learning and Practice

Hands-on learning is central to the knowledge transfer process. Several practitioners, including P01 and P06, indicated that a significant portion of their learning comes from directly engaging in the practice—whether through preparation of herbal remedies or patient care. This practical exposure is essential for developing a deeper understanding of herbs and their medicinal properties. This form of experiential learning is also a form of apprenticeship, where knowledge is transferred not only verbally but through active involvement in the process, allowing learners to acquire knowledge by doing.

### 3.5. Limited Family Involvement in Modern Context

Despite the historical importance of family-based knowledge transfer, some participants indicated limited involvement of family members in their practices. For example, participant 09 noted that his family members were engaged in different professions, and no one in his family was involved in herbal medicine practice. Similarly, participant 10 mentioned that his brother chose not to join the family business. This trend highlights a shift in the role of the family in knowledge transfer, as younger generations may not always be interested in continuing the herbal medicine tradition, preferring other professional paths. The growing disconnect between family and the herbal medicine profession may impact the continuity of knowledge transfer in these families.

**Table 2** Challenges and Opportunities in Knowledge Transfer

Opportunities in Knowledge Transfer		Challenges in Knowledge Transfer	
Themes	Subthemes	Themes	Subthemes
Growing interest in herbal medicine	People are becoming more interested in herbal medicine (P02) Increased customer base, growing practice (P10)	Lack of formal education	Not educated beyond class 10 (P10) Limited formal training (P01)
Peer-to-peer learning and collaboration	Sharing knowledge with peers(P02) Opportunities for collaboration with other practitioners(P04)	Misguided practices and misinformation	Some practitioners misguide patients (P10) Wrong advice from unqualified practitioners (P03)
Online learning and resources	Internet is used for research (P09) Online resources for herbal practices (P01)	Limited interest from younger generation	Younger family members uninterested (P10) Lack of family interest in practice (P09)
Formal recognition and certifications	Cooperative association for learning (P05) Licensing offers credibility (P06)	Lack of regulatory support	Poor regulatory system (P09) No formal licensing or certification (P10)
Mentorship and apprenticeships	Mentoring younger practitioners (P05) Training future herbalists through apprenticeship(P02)	Unavailability of formal mentorship	No apprenticeship system (P10) Mentorship is informal and sporadic (P08)
Cultural interest in herbal medicine	Herbal medicine is deeply rooted in culture (P02) Generational knowledge passed down (P04)	Mistrust in the practice	Public mistrust of herbal medicine (P02) Negative perception of herbal remedies (P04)
Expanding global recognition of herbal medicine	International collaboration on herbal practices (P09) Global demand for herbal medicines (P07)	Difficulty in passing on practical knowledge	Hard to transfer hands-on knowledge (P01) Knowledge not always documented (P08)

## 4. Challenges in Knowledge Transfer

### 4.1. Lack of Formal Education and Training

Many herbal practitioners, especially those from family-run practices, face a lack of formal education or training. Some participants mentioned that they have only reached basic educational levels, and formal training in herbal medicine is

limited or non-existent. For example, Participant 10 mentioned that they only completed class 10 education, and Participant 01 highlighted the challenges of working without formal training. This lack of structured education hinders the ability of practitioners to document and standardize the knowledge they acquire.

#### **4.2. Misinformation and Misguided Practices**

A significant challenge faced in knowledge transfer is the presence of misinformation, where some unqualified practitioners might mislead patients, resulting in distrust toward herbal medicine. Participant 10 noted that "misguiding patients" is a problem, and Participant 03 similarly observed that unqualified practitioners provide the wrong advice. This undermines the credibility of herbal practices and complicates the effective transfer of authentic knowledge.

#### **4.3. Generational Knowledge Gaps**

The knowledge transfer process in herbal medicine in Bangladesh is heavily dependent on family inheritance, yet there is a lack of interest from younger generations to continue the practice. As mentioned by Participant 10, their younger family members are uninterested in the practice, seeing it as unprofitable. This generational gap in interest can leave valuable knowledge without successors, which threatens the long-term sustainability of the practice.

#### **4.4. Limited Regulatory and Mentorship Support**

Another barrier is the lack of regulatory framework and formal mentorship. Many practitioners do not have licenses or formal certifications. For instance, Participant 10 did not have formal licensing, and Participant 01 noted the poor regulatory system, which weakens public trust in the practice. Furthermore, there is limited access to mentorship. While some practitioners pass on their knowledge informally, the lack of structured apprenticeship systems (as highlighted by Participant 10) restricts the broader dissemination of knowledge in a formal, standardized way.

#### **4.5. Practical Knowledge Transfer Challenges**

The practical aspects of herbal medicine, such as how to prepare specific treatments or apply remedies, are difficult to convey purely through words or written materials. Participant 01 and others emphasized the difficulty in transferring hands-on, practical knowledge. Since the knowledge is often passed on through direct experience, the absence of proper documentation or formal teaching methods makes this process even more challenging.

#### **4.6. Public Mistrust**

The perception of herbal medicine is also a challenge. Participant 02 mentioned that "public mistrust" is an issue, especially due to the widespread misconception about herbal practices. There are concerns about the efficacy and safety of herbal treatments, exacerbated by unregulated practices and misinformation. This results in reluctance among people to fully embrace herbal medicine, further complicating the transfer of knowledge.

#### **4.7. Opportunities for Knowledge Transfer**

##### *4.7.1. Increased Interest in Herbal Medicine*

Despite challenges, there is growing public interest in herbal medicine, particularly as people seek natural remedies over synthetic treatments. Participant 02 pointed out that there is a growing demand for herbal treatments, which creates opportunities for practitioners to expand their services and knowledge. Additionally, Participant 10 noted the increase in customers, indicating that the practice is becoming more popular.

##### *4.7.2. Peer-to-Peer Learning and Collaboration*

Collaboration and informal knowledge-sharing between practitioners are key opportunities for knowledge transfer. Participants such as Participant 02 have experienced positive outcomes from collaborating with peers and sharing knowledge about herbal treatments. This informal exchange of knowledge, while not always structured, can enhance the collective expertise within the community. Moreover, Participant 04 also noted that collaborations can foster innovation and mutual cooperation.

##### *4.7.3. Online Learning and Resources*

The internet offers significant opportunities for knowledge transfer. Many participants, such as Participant 01, mentioned the availability of online resources, which allow practitioners to expand their knowledge and stay informed about new trends and research in herbal medicine. Online platforms and digital learning can provide access to broader,

more structured forms of education and community engagement, thus facilitating knowledge transfer in a more formalized way.

4.7.4. *Formal Recognition and Certification*

The potential for formal recognition of herbal practices provides opportunities for growth. Participants like Participant 05 highlighted the benefit of being part of a cooperative association, which offers opportunities for learning, networking, and gaining legitimacy. Formal certifications and collaborations with recognized bodies could help herbal practitioners establish credibility and enhance their knowledge-sharing practices.

4.7.5. *Mentorship and Apprenticeship*

While formal apprenticeship programs are limited, there is potential for knowledge transfer through mentorship, especially among older practitioners. Participant 10 mentioned that they sometimes share knowledge with others who come to learn about herbs, and Participant 02 emphasized the importance of apprenticeship. The continuity of knowledge can be ensured through these informal mentorship arrangements, though they would benefit from greater structure and formal recognition.

4.7.6. *Cultural Interest and Generational Knowledge*

Herbal medicine is deeply ingrained in Bangladeshi culture, and the tradition of passing down knowledge within families is still a strong practice. Even though the younger generation may be less interested, as mentioned by Participant 04, the cultural value of herbal medicine ensures that there is still a significant amount of knowledge being transferred from one generation to the next. This cultural context offers a foundation upon which further formalization of knowledge transfer can be built.

4.7.7. *Global Recognition and Expansion*

The growing recognition of herbal medicine on the global stage offers new opportunities for local practitioners. As international collaborations expand, as noted by Participant 09, practitioners can participate in global networks and share their knowledge more widely. This global exposure can lead to increased demand and respect for traditional knowledge, providing an opportunity for practitioners to enhance their skills and reputation.

**Table 3** Knowledge transfer contributes to Herbal Medicine sustainability

Themes	Subthemes
Knowledge Preservation	Intergenerational knowledge transfer (P03) Family knowledge transfer (P08)
Practical Application	Practical skill transfer(P05) Knowledge in action(P01)
Business Sustainability	Business growth through knowledge(P03) Customer satisfaction(P06)
Continuing Education	Learning opportunities(P02) Online resources for knowledge(P10)
Sustainability through Mentorship	Passing knowledge to others(P07) Selecting the right apprentice(P09)

4.7.8. *Knowledge Preservation*

**Intergenerational knowledge transfer** is essential for sustaining herbal practices. Many herbal practitioners inherit their knowledge from family members (such as parents or grandparents) and continue to pass it down. This **family knowledge transfer** ensures continuity, with wisdom and expertise being shared across generations. For instance, Participant 08 learned the practice from his father, and this family-centered knowledge transfer is key to the longevity of the practice.

#### 4.7.9. Practical Application

**Practical skill transfer** is crucial for the survival of herbal medicine. Practitioners actively engage in the hands-on preparation and administration of herbal remedies, such as collecting, drying, and preparing herbal medicines. This **knowledge in action** ensures that knowledge transfer isn't just theoretical but is applied in real-world situations, benefiting both practitioners and patients. The practical, direct involvement of future herbalists ensures the continuation of these skills over time.

#### 4.7.10. Business Sustainability

**Business growth through knowledge** is another indicator of the role of effective knowledge transfer. The more knowledge a practitioner has, the more effectively they can run and expand their practice. For example, when practitioners gain more experience and knowledge, they attract more customers, which supports their business sustainability. Participant 10's observation that his practice is growing due to increasing customer numbers highlights how knowledge transfer directly contributes to business viability.

#### 4.7.11. Continuing Education

As herbal practitioners learn about new herbs and treatments, **learning opportunities** for continuous improvement play a significant role in the long-term sustainability of their practices. Access to information, including **online resources for knowledge**, enhances a practitioner's ability to stay relevant and provide up-to-date solutions to their patients. The ongoing learning, facilitated by the internet and conferences, ensures that practitioners continue to refine their practices and expand their knowledge base, which in turn sustains the profession.

#### 4.7.12. Sustainability through Mentorship

**Passing knowledge to others** is essential for ensuring that herbal practices continue even after the current practitioners retire or pass away. Knowledge transfer through mentorship allows the next generation of practitioners to step in and continue the work. Moreover, selecting the right apprentice or mentee, as highlighted by Participant 01, is key to maintaining the integrity of the practice. Effective mentorship ensures that the knowledge is transferred to capable individuals who understand the ethical responsibilities of the profession.

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## 5. Discussion

This study explores the critical role of knowledge transfer in sustaining the practice of herbal medicine in Bangladesh. The findings reveal a complex interplay of tradition, community dynamics, and modern challenges and opportunities. The discussion synthesizes the key themes of knowledge transfer mechanisms, the challenges faced by practitioners, and the opportunities to enhance the sustainability of herbal medicine practices.

### 5.1. Knowledge Transfer Mechanisms

Knowledge transfer in herbal medicine in Bangladesh is deeply rooted in familial and community traditions (Khan MSA, 2019). The generational knowledge transfer through families forms the cornerstone of this practice. Similar to findings from ethnobotanical studies, practitioners often inherit knowledge informally through oral traditions, observation, and hands-on training (Etkin & Ross, 1982). Participants in this study, such as P02 and P10, highlighted the importance of direct teaching from older family members, illustrating the role of intergenerational learning in sustaining the practice.

Community-based knowledge sharing and mentorship further enhance knowledge dissemination. As reported by participants like P03 and P04, interactions with peers and informal mentorships within the herbal medicine community foster a collaborative learning culture. This aligns with the findings of Gessler et al. (1995), who noted that communal exchange among practitioners helps maintain the collective knowledge of traditional medicine.

However, practical, hands-on learning remains a crucial component. The experiential learning described by participants such as P01 underscores the importance of engaging directly in the preparation and application of herbal remedies, a sentiment echoed in studies on traditional health practices in Asia (World Health Organization, 2002). This hands-on approach ensures that knowledge transfer remains actionable and directly applicable to patient care.

### 5.2. Challenges in Knowledge Transfer

The study identifies several barriers to effective knowledge transfer. A lack of formal education and training, as mentioned by Participant 10, hinders the documentation and standardization of herbal medicine knowledge. This



challenge resonates with prior research indicating the limited integration of traditional medicine into formal education systems in developing countries (Bodeker & Kronenberg, 2002).

Generational knowledge gaps pose a significant threat to the continuity of practices. Younger generations' lack of interest, as reported by P06, reflects broader trends of urbanization and professional diversification, which often divert individuals from traditional livelihoods (Rahman et al., 2021). Additionally, misinformation and unregulated practices exacerbate public mistrust in herbal medicine, as noted by participants like P03. These issues highlight the urgent need for regulatory frameworks and quality assurance mechanisms to protect the credibility of herbal practitioners.

### 5.3. Opportunities for Sustainability

Despite these challenges, the study identifies promising opportunities to sustain herbal medicine practices. The increasing demand for natural remedies, as observed by P02, reflects a global trend favoring traditional and complementary medicine (World Health Organization, 2019). This growing interest presents an opportunity for practitioners to expand their services and engage with broader markets (artins E, 2013).

The role of digital platforms and online resources in knowledge transfer is particularly noteworthy. Participants such as P01 acknowledged the value of internet-based learning for staying updated on trends and innovations in herbal medicine. Online platforms offer unprecedented opportunities for standardizing and sharing traditional knowledge, which could be further supported by formal certifications and cooperative associations, as mentioned by P10.

Mentorship and apprenticeship also offer pathways to sustain the practice. The informal mentorship observed in this study, while effective, would benefit from greater structure and formal recognition. Establishing apprenticeship programs could bridge generational gaps and ensure the ethical transmission of knowledge to capable successors (Shankar & Venkatesh, 2010).

### 5.4. Implications for Sustainability

Effective knowledge transfer is essential for ensuring the long-term viability of herbal medicine practices (Milica P, 2015). By preserving intergenerational knowledge, promoting practical skills through mentorship, and leveraging modern opportunities such as digital learning, practitioners can overcome many of the challenges identified in this study. Building public trust through regulatory frameworks and community engagement will further strengthen the credibility and sustainability of herbal medicine.

These findings highlight the dual importance of preserving traditional methods and embracing modern innovations. Combining cultural heritage with contemporary tools and systems can help secure the future of herbal medicine in Bangladesh while maintaining its integrity and efficacy.

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## 6. Conclusion

This study highlights the pivotal role of knowledge transfer in sustaining herbal medicine practices in Bangladesh. Rooted in family traditions and community-based sharing, the transfer of herbal knowledge occurs through intergenerational teaching, peer mentorship, and hands-on learning. Despite its cultural significance, the practice faces challenges such as generational knowledge gaps, misinformation, lack of formal training, and public mistrust. These barriers threaten the continuity and credibility of herbal medicine in the modern context. However, opportunities for sustainability abound, including growing public interest in natural remedies, digital learning platforms, and mentorship programs. Formal recognition and regulatory support could further enhance credibility and ensure ethical knowledge transfer. To secure the future of herbal medicine, a balance must be struck between preserving traditional methods and embracing modern innovations. Strengthened by structured education and global recognition, the practice has the potential to thrive while maintaining its cultural and medicinal significance.

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### Compliance with ethical standards

#### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

## References

- [1] Abu Jafor Mohammad Obaidullah (2018) Importance and prospects of medicinal plants in Bangladesh, pp. 1-24.
- [2] Artins E (2013) The growing use of herbal medicines: Issues relating to adverse reactions and challenges in monitoring safety. *Front Pharmacol* 4: 177.
- [3] Bodeker, G., & Kronenberg, F. (2002). A public health agenda for traditional, complementary, and alternative medicine. *American Journal of Public Health*, 92(10), 1582–1591.
- [4] Etkin, N. L., & Ross, P. J. (1982). Food as medicine and medicine as food. *Social Science & Medicine*, 16(17), 1559–1573.
- [5] Gessler, M. C., et al. (1995). Traditional healers in Tanzania: The relationship between their traditional and biomedical knowledge. *Journal of Ethnopharmacology*, 48(3), 233–242.
- [6] Ghani A (2016): Present state-of-the art of traditional medicine practice in Bangladesh; Available at: <https://books.google.com.bd/books?id=> [Accessed 20 Feb 2016].
- [7] Khan MSA (2019) Herbal medicine: Current trends and future prospects. *New Look to Phytomedicine. Advancements in Herbal Products as Novel Drug Leads*, Academic press, pp. 3-13.
- [8] Martins Ekor (2014) The growing use of herbal medicines: Issues relating to adverse reactions and challenges in monitoring safety. *Front Pharmacol* 4: 1-8.
- [9] Milica P (2015) Development of natural product drugs in a sustainable manner. *Brief for United Nations Global Sustainable Development Report*, pp. 1-4.
- [10] Mohammad AM (2010) Approaches to conservation of medicinal plants and traditional knowledge. IUCN (International Union for Conservation of Nature), KNCF (Keidanren Nature Conservation Fund), Bangladesh, pp. 1-30.
- [11] Rahman, M., et al. (2021). Decline of traditional medicine practices in urbanizing Bangladesh: Challenges for sustainability. *Journal of Ethnobiology and Ethnomedicine*, 17(1), 48.
- [12] Shankar, D., & Venkatesh, U. (2010). Traditional medicine education and management. *International Journal of Ayurveda Research*, 1(1), 5–8.
- [13] Thillaivanan S, Samraj KC (2014) Challenges, constraints and opportunities in herbal medicines: A review. *Int J Herbal Med* 2: 21-24.
- [14] World Health Organization. (2002). *Traditional Medicine Strategy 2002–2005*. Geneva: WHO.
- [15] World Health Organization. (2019). *WHO Global Report on Traditional and Complementary Medicine 2019*. Geneva: WHO.