

AyurSutra: A Digital Platform for Panchakarma Patient Management and Automated Therapy Scheduling- A Review

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Abstract

Introduction: *Panchkarma*, a fundamental therapeutic approach in *Ayurveda*, focuses on detoxification and rejuvenation through procedures such as *Vamana*, *Virechana*, *Basti*, *Raktamokshana* and *Nasya*. However, traditional management of these therapies often relies on manual processes, resulting in inefficiencies and inconsistent patient care. AyurSutra, a digital platform has developed to streamline *Panchkarma* patient management and automate therapy scheduling. **Aims & Objectives:** The present study is to explore and evaluate the efficacy of *AyurSutra* platform in improving the documentation and treatment management scheduling. **Methodology:** The platform enables real-time therapy tracking, automated reminders and feedback-driven adaptive care through the functional systems adopting modern technology. **Observation & Results:** This software streamline *Panchakarma* therapeutics effectively by addressing the limitations of manual management. **Discussion:** The system supports standardized therapy delivery and better monitoring of patient progress. Through automation, real-time monitoring and adaptive feedback these digital platforms can enhance therapy standardization and improve patient outcomes. **Conclusion:** The integration of digital technologies with *Ayurvedic* practices through *AyurSutra* provides a scalable solution that enhances healthcare efficiency while preserving traditional principles.

Keywords: *Ayurveda*, *Panchkarma*, Digital Health, Therapy Scheduling, Patient Management, Healthcare Technology.

Introduction

In recent years, the healthcare sector has increasingly adopted digital technologies to improve efficiency, accuracy and patient care. However, the integration of such technologies into *Ayurveda* particularly in *Panchakarma* practices, remains limited. Most *Ayurveda* centers still rely on paper-based records and manual scheduling, which

can lead to errors, delays and difficulty in tracking patient progress over time.

The absence of a structured digital system also affects communication between practitioners and patients. Patients may miss therapy sessions due to lack of timely reminders and practitioners may find it difficult to monitor adherence to prescribed procedures and post - therapy guidelines. This gap highlights the need for a comprehensive solution that combines traditional Ayurvedic knowledge with modern digital tools.

Furthermore, the growing demand for *Panchakarma* therapies both in India and globally necessitates a scalable and standardized system for managing patient data and therapy schedules. A digital platform can ensure better organization, improve accessibility and support evidence-based practice by maintaining accurate records and analytics. *AyurSutra* is a web- based digital platform developed by a health-tech team to support *Panchakarma* management through a structured format. The development of *AyurSutra* aims to address these challenges by providing an integrated digital platform for efficient *Panchkarma* patient management, automated scheduling and enhanced healthcare delivery.

Aim:

To explore and evaluate the role of *AyurSutra* in clinical data recording, therapy scheduling and data visualization, with the aim of improving the effectiveness of panchakarma therapy.

Objective:

- To evaluate the clinical data recording capabilities of AyurSutra.
- To assess the therapy scheduling features of AyurSutra in Panchakarma practice.
- To examine the effectiveness of AyurSutra's data visualization tools for patient monitoring.
- To evaluate the overall utility of AyurSutra in improving Panchakarma treatment management.

Methodology:

The *AyurSutra* platform⁽¹⁾ is designed using a modern technological framework to ensure scalability and usability exclusively for *Panchakarma* therapies. *Panchakarma* are 5 *shodhana* therapies (purificatory procedures) to eliminate toxicity from body, keeping body and mind healthy. It also includes preceding procedures like *Deepana* (promoting digestive fire) *Pachana* (digestion) *Snehana* (oleation) *Swedana* (fomentation) etc and follow up procedures like *Samsarjana* karma (structured dietetic regimen) *Dhoomapana* (fumigation) etc. Functional module includes automated therapy scheduling system, notification system, SMS, and email APIs, real-time therapy tracking, visualization tools and feedback-based adaptive care system.¹

a. Diagnostic Methods

Diagnosis in *Ayurveda* is based on a holistic assessment of the patient, focusing on the balance of *Doshas* (*Vata*, *Pitta* and *Kapha*), *Agni* (digestive fire), *Dhatu* (body tissues) and *Mala* (waste products). In this software, both traditional *Ayurvedic* diagnostic approaches and basic clinical evaluation were considered. According to *Ayurveda*, *Rogi pareeksha* (examination of patient) is an important step before selection of any treatment procedures².

Ayurveda science explains on many types of examinations to understand the strength of the body and mind of patients. The strength of disease is decided by strength of patient, climate, place where the disease developed, birth place of patient and duration of root cause³. But on integration of tradition to technology selected examination methods included to provide better treatment outcomes.

The primary method used was *Trividha Pariksha*, which includes *Darshana* (inspection), *Sparshana* (palpation), and *Prashna* (interrogation)⁴. Additionally, *Ashtasthana Pariksha* was employed, which involves eight parameters: *Nadi* (pulse), *Mutra* (urine), *Mala* (stool), *Jihva* (tongue), *Shabda* (speech), *Sparsha* (touch), *Drik* (eyes) and *Aakruti* (body build)⁵. Patients were examined for physical signs, symptoms and medical history to understand their health condition in modern science too. Based on the findings, suitable *Panchakarma* procedures such as *Vamana*, *Virechana*, *Basti*, or *Nasya* are recommended. The diagnostic data were recorded and managed within the *AyurSutra* system to support personalized therapy planning and monitoring.

b. Procedures

Patients are registered digitally, and therapies are assigned based on practitioner input. Notifications are sent before and after therapy sessions. Patient progress is continuously monitored and updated in the system.

c. Inclusion Criteria & Exclusion Criteria Inclusion Criteria

- i. Patients undergoing Panchakarma therapies
- ii. Registered users in Ayurveda centers

d. Exclusion Criteria

- iii. Patients not enrolled in digital tracking systems
- iv. Incomplete therapy records

Observation & Results

The implementation of *AyurSutra* demonstrated significant improvements in therapy management.

- Reduced manual scheduling errors
- Increased patient adherence due to automated reminders
- Improved tracking of therapy sessions
- Efficient storage and retrieval of patient data
- Enhanced personalization through feedback systems

Compared to traditional systems, the platform provides better consistency and reliability in delivering *Panchakarma* therapies. The findings align with earlier research emphasizing the role of digital systems in healthcare efficiency.

Discussion

Ayursutra is a revolutionary software developed in the field of *Panchkarma*. The integration of digital tools in *Ayurvedic* practices without affecting its authenticity presents a transformative approach to traditional healthcare systems. As *Panchkarma*, an important branch of *Ayurveda* faces a lot of difficulties in its therapeutic procedures as every stage of treatment patient monitoring and evaluation required. From initial counselling, to continuation and completion of whole set of treatments is mandatory for results. The withdrawal of *Shodhana* treatment may causes complications if its not under advice of consultant. While undergoing *Shodhana* procedures, identifying wholesome for an individual and avoiding unwholesome is also an important step. Thus, this mobile friendly software streamline *Panchkarma* therapeutics effectively by

addressing the limitations of manual management by introducing automation, real-time monitoring and adaptive feedback. The results indicate that digital platforms can enhance therapy standardization and improve patient outcomes. Challenges such as data privacy and user adoption can be managed through secure authentication systems and proper training. The system also supports scalability, making it suitable for both small clinics and large *Ayurveda* centers.

Conclusion

The present study introduces *AyurSutra* as a digital platform designed to improve the management of *Panchkarma* therapies in *Ayurveda*. The system effectively addresses the limitations of traditional manual practices by automating therapy scheduling, enabling real-time monitoring and integrating notification-based patient engagement. The findings demonstrate that the platform significantly reduces scheduling errors, enhances patient compliance and improves overall therapy management.

The relevance of this study lies in its ability to bridge the gap between traditional *Ayurvedic* practices and modern healthcare technology. By incorporating digital tools such as data visualization and feedback systems, *AyurSutra* supports more structured and standardized delivery of *Panchkarma* procedures. This not only improves clinical efficiency but also enhances patient outcomes and satisfaction.

Furthermore, the platform contributes to the growing field of digital healthcare by promoting the adoption of technology in *Ayurveda*, which has traditionally relied on manual systems. The study directly fulfills its aim by demonstrating that automation and digital integration can significantly improve therapy management and patient care. It's a part of sustainability policies as its ecofriendly by reducing use of papers.

Thus, *AyurSutra* represents a practical and scalable solution that enhances the quality, accessibility and effectiveness of *Panchakarma* treatments while preserving the fundamental principles of *Ayurveda*.

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Conflict of Interest

The authors declare that there is no conflict of interest.

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