INTEGRATING ALTERNATIVE MEDICAL PRACTICES FOR BUILDING A SUSTAINABLE HEALTHCARE SYSTEM: A PATHWAY TO HOLISTIC AND RESILIENT PATIENT CARE

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ABSTRACT

Global healthcare systems can no longer bear the burden of chronic illnesses, high costs, and environmental challenges. Although biomedical models have become more advanced, they still overlook preventive, holistic, and person-centered approaches to health. Incorporating alternative medical practices—known as Traditional, Complementary, and Integrative Medicine (TCIM) is a step toward sustainable and resilient healthcare. The study seeks alternatives to sustainability that boost prevention, empower patients, and are environmentally friendly. According to a qualitative review and thematic analysis of recent literature (2020– 2025), mechanisms, barriers, and policy implications of integration are identified. Studies reveal that the most frequently cited topics were person-centered care, prevention/self-care, interprofessional collaboration, evidence-based regulation, and system sustainability. Integrative models enhance health system resilience, equity, and resource utilization, the study concludes. Theoretical implications involve reconceptualizing health care through a maltogenic lens, whereas practical implications emphasize the need for policy transformation, workforce education, and empirical evaluation in India.

Keywords Integrative Medicine, Traditional and Complementary Medicine, Sustainable Healthcare, Holistic Care, Healthcare Resilience

Abbreviation

AYUSH- Ayurveda, Yoga, Unani, Siddha, and Homeopathy
TCIM- Traditional, Complementary, and Integrative Medicine
UHC- Universal Health Coverage
SDGs-Sustainable Development Goals
GDP- Gross Domestic Product
LMICs-Low- and Middle-Income Countries
WHO- World Health Organization
TCM- Traditional Chinese Medicine
PMC- PubMed Central

INTRODUCTION

The pressure on healthcare systems across the world today is unprecedented due to the burden of chronic disease, the demographic and epidemiological transition, the increasing cost of treatment, and environmental damage. Even when technology is integrated, illness-focused models are alienated and proactive rather than prevention-focused. For this reason, they frequently overlook the psychosocial, behavioral, and environmental determinants of health that are essential for sustainability over time. India's Ayushman Bharat launch and the institutionalization of AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) are landmark events in the history of India's traditional medical systems.

In India, the Ayushman Bharat initiative and the institutionalization of AYUSH mark critical milestones in recognizing traditional medical systems as integral to national health policy. The World Health Organization (WHO, 2023) calls for all countries to include Traditional, Complementary, and Integrative Medicine (TCIM) in their formal health systems to support Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs). The focus is shifting from curative hospital-based care to prevention and wellness care in community models (Hoenders et al., 2024; Wątróbski et al., 2023).

With the launch of the Ayushman Bharat scheme, the advantages of Indian traditional medicine have been recognized as the first-ever policy of the Government of India. By institutionalizing AYUSH — Ayurveda, Yoga, and related products and services —India's health care system will have a place for them. According to WHO (2023), TCIM should be more formally integrated into health systems worldwide to facilitate Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs). There is a movement towards prevention, wellness, and community-based models from curative, hospital-based care (Hoenders et al., 2024; Wątróbski et al., 2023).

Background of Study

The study's background focuses on sustainability principles as they make their way into the health care system. Most economists agree that health expenditures have exceeded GDP growth, imposing a significant fiscal burden on governments and health institutions (Badanta et al., 2025). In India, inequities in healthcare access—especially between urban and rural populations—lifestyle-related diseases such as diabetes, hypertension, and cardiovascular disease are increasing fast. There is a need to reorient the health system for prevention and holistic wellbeing (Seetharaman, 2021). According to the report (2024), the alternative systems, i.e., ayurveda, yoga, and naturopathy, have considerable potential in preventive health, chronic disease management, and psychosocial support (Locke et al, 2024 ; Open Access Journals, n.d.).

Across the world, research suggests that integrating these practices into standard medicine not only complements treatment but also improves the cost-effectiveness,

satisfaction, and community involvement of patients (Northwestern Health Sciences University, n.d.). The use of different practices along with modern ones can be seen as a growing response to the difficulty of creating sustainable health systems that can deal with biological and environmental determinants of health.

The rationale to explore integrative models as pathways to a resilient, equitable, and sustainable healthcare ecosystem is provided in the background.

OBJECTIVE

This paper aims to examine how integrating alternative medical practices contributes to building sustainable healthcare systems by enhancing resilience, equity, and holistic patient care.

Research Questions

- How can alternative medical practices contribute to healthcare sustainability across economic, social, and environmental dimensions?
- What mechanisms and models support effective integration of alternative practices into mainstream healthcare?
- What barriers and enablers influence the integration of alternative practices in healthcare systems?
- What are the observed impacts of such integration on patient outcomes, equity, and system resilience?

LITERATURE REVIEW

Concept of Alternative and Integrative Medicine

Various systems are included under the umbrella of alternative medical practices. These include, for example, Ayurveda, Traditional Chinese Medicine (TCM), naturopathy, diet, acupuncture, and mind-body therapies. Balance, prevention, and harmony form the basis of practice (Hoenders et al., 2024). Integrative medicine is the integration of conventional biomedical treatment with complementary approaches in an evidence-informed and patient-centered manner to promote health as a whole-person concept encompassing the physical, mental, social, and spiritual aspects of health (Locke et al., 2024). Research on integrated care systems continues to confirm their effectiveness in improving clinical outcomes, patient experience of care, and the value of care (Jonas et al., 2021). Recent studies also align integrative health with social and environmental justice, establishing holistic medicine as a way for medical practice to become equity- focused, ecologically responsible, and a wholly sustainable community. (Agarwal, 2024). All of these viewpoints, then, point to integrative medicine not merely as an adjunct to standard care but as a change in approach towards more holistic, sustainable, and human-oriented care.

Sustainability in Healthcare Systems

The capability of a health system to deliver fair, effective, and environmentally friendly care sustainably over time, with adequate budgets and operations, is termed health system sustainability (Padget et al., 2024). A sustainable healthcare system relies on the economy, society, and the environment.

More precisely, the efficiency of expenditure ensures the accessibility, acceptability and affordability of service delivery. In turn, the equity of healthcare services ensures minimization of emissions, waste, and energy use.

Integrative medicine contributes to the sustainability of health care by promoting preventive care, self- management, and community-oriented wellness initiatives that yield significant reductions in hospitalizations and long-term treatment costs (Seetharaman, 2021). According to a systems perspective, sustainability depends on adaptive capacity and resilience. These positive aspects benefit from the co-existence of therapeutic models. It reinforces patient autonomy (Wątróbski et al., 2023). Through careful alignment with preventive and person-centered care philosophies, integrative medical systems enhance the responsiveness and efficiency of the health sector while ensuring ecological responsiveness, which strengthens the sustainability agenda.

Empirical and Policy Developments

Research and analysis done in the last decade show the positive and negative aspects of integrating Traditional, Complementary and Integrative Medicine (TCIM) into national health systems. The World Health Organization (2023), through its TCIM Global Strategy 2025-2034, highlighted the importance of appropriate policies and funding dedicated to the regulation and strengthening of research infrastructure to promote the safe and effective use of TCIM. The strategy calls for TCIM to be included in Universal Health Coverage (UHC) frameworks and for the development of evidence-based policy instruments within global health equity.

In India, several steps taken up by the Government of India through the Ministry of AYUSH are speeding up the mainstreaming of TCIM. This is done through the setting up of integrative health centers, AYUSH colleges, as well as cross-referral networks between modern and traditional practitioners (PMC, 2024). India's acknowledgement of the importance of holistic and preventive medicine for its population's health has been on the rise. Data collected through observation shows that AYUSH services are being more increasingly used with biomedical treatments by patients suffering from chronic and lifestyle-related diseases particularly in primary health care in rural areas (Maghrabi et al., 2023).

Nevertheless, challenges persist pertaining to regulatory oversight, credentialing of practitioners, and quality of clinical evidence related to TCIM. The implementation science literature suggests that fragmented governance, inconsistent research funding, and the lack of compatible quality assurance criteria for TCIM impede many national systems from engaging with TCIM (Chung, 2023). Practitioner collaboration and public trust were hindered by these issues.

To conclude, there is growing policy momentum and grassroots adoption of integrative health. However, the institutionalization would require stronger regulation, better generation of evidence, and more sustained policy consistency.

Synchronizing research evidence and national policies is critical to activating TCIM's potential capacity to foster sustainable and equitable health systems.

RESEARCH GAPS

There is considerable development in policy and arising recognition of integrative healthcare, but there continue to be critical research gaps. Current evidence-based, long-term studies examining the link between integrative care practices and measurable sustainability outcomes (e.g. cost, environmental impact, and resilience of the healthcare system) are lacking. Few studies have thoroughly investigated the cost- effectiveness, ecological benefits of these treatments.

Furthermore, poor inter-professional education, diverging regulatory frameworks, and inadequate research capacity in LMICs, pose challenges to the effective implementation of integrative models. Organizations need stronger empirical research, context-specific frameworks, and cross-sectoral collaboration to support the case for integration as a sustainable health care strategy.

Methodology

This study adopts a **qualitative integrative review and thematic analysis** approach. Secondary data were sourced from peer-reviewed journals, WHO reports, and open-access policy papers published between 2020 and 2025. Databases research included Scopus, PubMed, and SpringerLink using the keywords *integrative medicine*, *sustainable healthcare*, and *TCIM*. Extracted data were coded thematically based on recurring patterns regarding integration mechanisms, barriers, and sustainability outcomes. Themes were refined through iterative reading and comparison, producing the five dimensions summarized in Table 1.

Findings and Thematic Analysis

According to the Table below, a thematic synthesis of the relevant literature (2020–2025) on the use of alternative medicine in sustainable health care has been conducted. The analysis identifies five main themes emerging from 20 peer-reviewed studies, highlighting the multifaceted nature of integrative medicine. The themes include person-centered and whole-person care, preventive and self-care, interprofessional collaboration, evidence-informed regulation, and a resilience-oriented system. Overall, the evidence shows that complementary medicine can improve the health and safety of patients and the health care system when properly integrated, and is superior to treatments that are not properly integrated.

Table 1: Thematic Analysis of Literature on Integrating Alternative Medical Practices for Sustainable Healthcare

Theme	Key Description	Supporting Evidence
Person-centered, whole-person care	Focuses on treating individuals holistically, considering physical, emotional, and social factors rather than focusing solely on disease symptoms.	Locke et al. (2024). Seetharaman (2021)
Prevention and self-care	Emphasizes lifestyle modification, self-management, and early intervention, reducing dependence on acute care.	Open Access Journals (n.d.); Padget et al. (2024)
Interprofessional collaboration	Promotes cooperation between biomedical and alternative practitioners through referral networks or joint clinics.	Hoenders et al.(2024); WHO (2023)
Evidence-based regulation and quality assurance	Requires safety validation, practitioner licensing, and research to build credibility and trust.	WHO (2023); Badanta et al. (2025)
System resilience and sustainability	Enhances healthcare adaptability, reduces costs, and aligns with ecological and social sustainability goals.	Northwestern Health Sciences University (n.d.); Wątróbski et al. (2023)

DISCUSSION

RQ1: Contribution to Healthcare Sustainability

By moving away from disease treatment and focusing on health creation, alternative medical practices encourage sustainability. Preventive, low-cost interventions lessen hospital admissions and other energy-demanding treatments, indirectly decreasing the carbon footprint of the sector (Padget et al., 2024). Furthermore, community-based wellness programs empower patients, decentralize care, and increase accessibility in rural areas—a major concern in the Indian context. By applying the above methods, healthcare deals that have an enhanced population health outcome as well as enhanced system efficiency over the long-term system.

RQ2: Mechanisms and Models of Integration

Integration takes place via collaborative care models, public policy frameworks, and academic partnerships. Interprofessional education assists doctors and traditional practitioners in sharing competencies. According to WHO (2023), we encourage the use of co-located integrative clinics that combine biomedical diagnostics with Ayurvedic or naturopathic therapies under evidence-based supervision. Sustainable implementation requires institutional

leadership, training and systemic incentives for individuals involved (Zurynski et al., 2023). Mechanisms that integrate promote working together and respect for each other across the medical field and this allows for a more patient-centered and sustainable approach.

RQ3: Barriers and Enablers

Barriers include insufficient evidence on cost-effectiveness, fragmented policy, lack of insurance coverage, and professional skepticism. Additionally, weak regulatory oversight undermines product quality and patient safety.

Enablers involve policy recognition of AYUSH systems, consumer demand for holistic care, government funding for integrative research, and the growing emphasis on sustainable public health strategies. Implementation science suggests that leadership continuity, funding, and contextual adaptation are critical to maintaining long-term integration (Zurynski et al., 2023).

RQ4: Impacts on Patient-centeredness and System Resilience

Models that integrate systems work on patient satisfaction. They also improve adherence and trust. According to Northwestern Health Science University, there might be a little benefit of diversification in care modalities and decreasing burnout in workforce rot mechanisms. More data will be needed to provide conclusive quantitative evidence, but the qualitative data indicates improved continuity of care, patient empowerment and lower dependency on medicines. All of these lead to the sustainability of the system. Furthermore, integrative approaches contribute to a more robust health system by enhancing resilience, cultivating a preventive culture among providers and patients, and facilitating coherence in practices with social and environmental sustainability.

Implications

Theoretical Implications

The salutogenic model of health care shifts attention from pathology to the origin of health. Integrative systems represent a systems-thinking approach whereby social determinants, prevention, and environmental externalities are dealt with at the same time especially (Locke et al., 2024). Findings that bridge integrative medicine with sustainability science and resilience theory may inform a holistic concept for 21st-century healthcare.

Practical Implications

- **Policy Frameworks:** Integrate TCIM formally into healthcare regulation, ensuring safety, research funding, and professional accreditation.
- **Institutional Leadership:** Hospitals should develop integrative departments and sustainability offices to track preventive impact and energy efficiency.
- **Workforce Development:** Introduce cross-disciplinary curricula combining modern medical sciences with evidence-based traditional therapies.
- **Patient Engagement:** Empower

communities through wellness education, yoga, nutrition, and mental health awareness.

- **Research Infrastructure:** Create national centers for integrative medicine evaluation focusing on environmental and cost metrics.

Recommendations and Future Research Recommendations

- Policymakers need to create a health policy framework that deals with TCI, which formally includes TCIM in healthcare regulation, practitioner accreditation, and allocation of funds for cost-effectiveness and sustainability outcomes.
- Healthcare institutions should establish integrative care units merging modern and traditional practices while monitoring impact of preventive activity and energy efficiency.
- Educational and research institutions should create cross-disciplinary curricula and strengthen evidence generation through special centers for integrative medicine.
- Healthcare professionals should participate in interprofessional training and implement person- centered approaches based on evidence-based standards to enhance the trust of these patients.
- To ensure sustainable health for all, patients and community members must be empowered with wellness education, knowledge of self-care, and participation in shared decision-making.

Future work should:

- Conduct **longitudinal studies** assessing cost savings, emissions reduction, and clinical outcomes of integrative models.
- Develop **context-specific frameworks** for LMICs like India, emphasizing community-driven preventive health.
- Evaluate **training and credentialing systems** for alternative practitioners to ensure safety and consistency.
- Apply **implementation science approaches** to identify success factors in long-term integration.
- Establish **metrics and indicators** for measuring sustainability performance in integrative healthcare (economic, ecological, and social).

CONCLUSION

The alternative medicine integration into mainstream healthcare represents not just a complementary movement, but a transformative shift towards holistic, equitable and sustainable health systems. Integrating this way improves prevention, engages patients, and ensures stewardship of the environment. Yet there are still institutional barriers, regulatory uncertainty and uneven evidence. AYUSH and other systems offer a unique opportunity to increase resilience, lower costs and realize universal and sustainable health in India and similar countries.

Future development will rely upon multidisciplinary collaborations, policies with frameworks and measurable standards for sustainability. An authentic sustainable

healthcare ecosystem that values healing over mere treatment is possible through a judicious mixture of traditional wisdom and modern science.

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