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Ministry of AYUSH
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YANTRA 2026

Yoga & Ayurveda in Neurosciences: Therapeutics & Research Approaches

AN INTERNATIONAL CONFERENCE

SOUVENIR

ABSTRACT BOOK

THEME

Evidence in Integrative Medicine



29th & 30th October, 2026



Organized by:

Department of Intergrative Medicine
National Institute of Mental Health and Neuro Sciences, Bengaluru

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Concept and Symbolism of the Souvenir Cover Design



The cover design represents the integration of traditional Ayurvedic knowledge with contemporary scientific research, reflecting the YANTRA 2026 theme, "Evidence in Integrative Medicine." The open book in the centre, while the interwoven colours represent the convergence of Ayurveda and modern science, inspiring delegates to expand their understanding beyond textbooks. The surrounding illustrations highlight the diverse yet interconnected domains of genomics, molecular biology, neuroscience, phytochemistry, gut microbiome research, yoga, and evidence-based scientific inquiry. The interconnected circles highlight integrative medicine's multidisciplinary nature, with each element representing a key area explored at YANTRA and offering delegates opportunities to broaden their knowledge and scientific perspectives.

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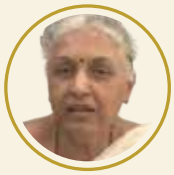
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Prof. (Dr.) M. Srinivas
MEMBER



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9 October, 2026

MESSAGE

The journey from knowledge to evidence and from evidence to meaningful healthcare requires sustained inquiry. YANTRA 2026, through its theme "Evidence in Integrative Medicine," creates an opportunity to examine how traditional knowledge can engage constructively with contemporary scientific methods.

Ayurveda and other traditional systems contain concepts and practices that can generate relevant research questions. The challenge and opportunity lie in studying these questions systematically, using suitable scientific tools while retaining an appreciation of the conceptual and historical foundations from which they arise.

Modern scientific approaches can help investigate mechanisms, outcomes, patterns of response and potential applications. At the same time, integrative research benefits from investigators who can communicate across disciplines and recognise that different knowledge traditions may contribute distinct perspectives to a research question.

YANTRA 2026 can therefore serve as a meeting ground for Ayurveda, integrative healthcare and contemporary science, particularly by encouraging young researchers to ask meaningful questions and pursue them through collaborative inquiry.

The value of such a gathering extends beyond the sessions themselves. The ideas exchanged, questions identified and relationships developed during the conference can become the basis for future academic and research initiatives.

I extend my sincere wishes to all participants and to the organizing team, and hope that YANTRA 2026 will inspire many new journeys in integrative medicine.

(Dr. M. Srinivas)

वैद्य राजेश कोटेचा
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Vaidya Rajesh Kotecha
Secretary

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MESSAGE

It gives me immense pleasure to convey my greetings and best wishes on the occasion of the Third International Conference on "Yoga, Ayurveda and Neuroscience: Traditions and Research Approaches", being organized by the Department of Integrative Medicine, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, on 29–30 October 2026.

India's traditional systems of knowledge, particularly Ayurveda and Yoga, represent a rich heritage of holistic approaches to health and well-being. Their growing relevance in contemporary healthcare underscores the importance of systematic research, scientific validation and meaningful integration with modern medicine.

The convergence of Yoga, Ayurveda and Neuroscience offers a promising interdisciplinary platform for advancing our understanding of mind–body health and for exploring innovative approaches to prevention, promotion and management of health conditions. Such initiatives are particularly significant in the context of the increasing burden of mental health disorders and lifestyle-related diseases, where comprehensive and patient-centered approaches are gaining importance.

The theme of the conference, "Evidence-Based Therapy," appropriately highlights the need to strengthen the scientific foundations of traditional practices through rigorous research, appropriate methodologies and translational approaches. Building bridges between traditional knowledge and contemporary science can contribute to the development of safe, effective and evidence-informed healthcare practices while preserving the integrity of these knowledge systems.

NIMHANS has a distinguished legacy in mental health and neurosciences, and the Department of Integrative Medicine represents an important initiative towards bringing together diverse systems of knowledge and healthcare. I appreciate the efforts of the Department in promoting education, clinical services, research and interdisciplinary collaboration in this field.

I am confident that this conference will provide a valuable platform for researchers, clinicians, academicians and practitioners from India and abroad to exchange knowledge, deliberate on emerging evidence and identify future directions for research and practice in Integrative Medicine.

I extend my best wishes to the organizers, delegates and participants for a successful and fruitful conference and for the continued advancement of evidence-based Integrative Medicine.

(Rajesh Kotecha)

28th September, 2026
New Delhi

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Dr. Y. C. Janardhan Reddy
DPM, MD
Director and Senior Professor of Psychiatry



MESSAGE

It is my great pleasure to welcome distinguished experts, researchers, clinicians, students and delegates to YANTRA 2026 at the National Institute of Mental Health and Neuro Sciences, Bengaluru.

Mental and neurological disorders arise from complex interactions among biological, psychological, social, behavioural, environmental and cultural factors. Understanding such conditions therefore benefits from perspectives that can address this complexity while maintaining clear scientific and clinical standards.

The theme "Evidence in Integrative Medicine" is particularly relevant to the mission of NIMHANS. Integrative approaches should be examined not only for their theoretical promise, but also for their safety, clinical relevance, patient experience and measurable outcomes. Such evaluation can help distinguish promising approaches from those that require further investigation.

NIMHANS has a longstanding tradition of bringing together psychiatry, neurology, neuroscience, psychology, public health and other disciplines in education, research and clinical care. YANTRA 2026 builds upon this institutional strength by creating a forum in which varied areas of expertise can engage with questions arising in integrative healthcare.

I hope the conference will deepen academic understanding of integrative approaches and encourage continued attention to patient-centred outcomes. I congratulate the Department of Integrative Medicine and the organizing team, and extend my warm wishes to all participants for a meaningful conference.

Dr. Y. C. Janardhan Reddy
Director
National Institute of
Mental Health & Neuro Sciences
Bengaluru - 560 029

Dr. Y.C. Janardhan Reddy
Director

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REGISTRAR'S MESSAGE



On the occasion of YANTRA 2026, I extend my heartfelt greetings and best wishes to all the scholars, clinicians, researchers, academicians, and healthcare professionals gathered at the Department of Integrative Medicine, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, in collaboration with the Ministry of AYUSH, Government of India.

Centred on the theme "Evidence in Integrative Medicine," YANTRA 2026 provides a valuable platform for meaningful dialogue and collaboration between traditional systems of medicine and contemporary scientific research. Integrative medicine offers important opportunities to bring together the strengths of traditional healthcare practices and modern medical science, with the shared goal of improving patient care and advancing human health. In this endeavour, rigorous scientific evaluation is essential to establish the safety, efficacy, and mechanisms of traditional interventions and to support their responsible integration into evidence-based healthcare.

By bringing together experts from AYUSH systems, neuroscience, psychiatry, biomedical research, and public health, YANTRA 2026 creates an important forum for sharing scientific knowledge, discussing emerging evidence, and identifying new directions for collaborative research. I am confident that the scientific deliberations, presentations, and interactions during this conference will encourage methodological rigour, foster innovative research, and strengthen partnerships across disciplines and institutions.

I also commend the Department of Integrative Medicine, NIMHANS, and all the organisers for their continued efforts to advance research, education, clinical practice, and knowledge exchange in integrative healthcare. The publication of this souvenir is a valuable initiative that documents the spirit of the conference and reflects the collective commitment of the scientific community to advancing evidence-informed healthcare.

May YANTRA 2026 encourage meaningful collaborations, and contribute to the development of safe, effective, and scientifically validated integrative approaches to mental and neurological health. I extend my sincere best wishes for the grand success of the conference and for the continued growth of integrative medicine in India and beyond.

Harsha A H, ICAS
Registrar, NIMHANS

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MESSAGE

The advancement of healthcare rests on a strong foundation in basic sciences, rigorous academic training and a sustained commitment to scientific inquiry. YANTRA 2026 offers a valuable platform to explore how these foundations can contribute to the systematic evaluation of traditional health practices and their potential relevance to contemporary medicine.

Basic sciences research is central to understanding the biological mechanisms underlying health and disease. In the context of integrative medicine, interdisciplinary research provides opportunities to investigate the molecular, cellular and physiological processes associated with traditional interventions. The application of appropriate scientific methodologies and clearly defined outcomes can strengthen the evidence base and inform future research.

Equally important is the cultivation of a research culture that promotes critical thinking, methodological rigour, reproducibility and ethical responsibility. Academic institutions have a vital role in nurturing these values among students and early-career researchers, empowering them to address complex scientific questions and contribute meaningfully to the advancement of knowledge.

The theme of YANTRA 2026, **"Evidence in Integrative Medicine,"** underscores the importance of bringing traditional knowledge into constructive dialogue with contemporary scientific inquiry. Progress in this field calls for well-formulated research questions, appropriate study designs and objective interpretation of findings. Such an approach can help establish a credible scientific foundation for integrative medicine while identifying promising avenues for further investigation.

I commend NIMHANS and the Department of Integrative Medicine for organising this conference and fostering meaningful academic exchange across disciplines. I hope YANTRA 2026 will inspire new research collaborations, strengthen scientific scholarship and encourage young investigators to pursue innovative questions with intellectual curiosity and scientific integrity.

I extend my sincere wishes to the organisers, faculty members, researchers, students and delegates for a successful and intellectually enriching conference.

Dr. Thennarasu Kandavel
Dean (Basic Sciences) & Controller of Examinations
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24/10/2026

MESSAGE

It is a pleasure to convey my best wishes to YANTRA 2026, an academic initiative that brings together diverse perspectives to advance research in neuroscience and mental health.

The human brain is a remarkably complex system, shaped by the dynamic interplay of neural networks, molecular processes, cognition, behaviour and the environment. Understanding this complexity requires scientific approaches that move across disciplinary boundaries and connect fundamental discoveries with clinically meaningful questions.

The interface of Ayurveda, Yoga and contemporary neuroscience offers opportunities to investigate how traditional health practices may influence brain function, stress regulation, cognition and mental well-being. Exploring these questions through neurobiological measures, imaging, physiological assessments and well-designed clinical studies can help clarify underlying mechanisms and identify areas for further investigation.

A key strength of neuroscience lies in its ability to connect observations at different levels of biological organisation. Integrative research can benefit from this perspective by developing testable hypotheses, applying appropriate methodologies and interpreting findings within the limits of available evidence. Such an approach can foster innovation while upholding the scientific standards essential to responsible healthcare.

I am confident that YANTRA 2026 will encourage productive interaction among neuroscientists, clinicians and researchers from traditional systems of medicine. I particularly hope that the conference will inspire young investigators to pursue interdisciplinary questions with curiosity, precision and scientific integrity.

I congratulate the Department of Integrative Medicine, NIMHANS, and the organising team for bringing together this scholarly platform. I extend my best wishes to all delegates for fruitful discussions and meaningful academic engagement.

Dr. Nalini A

Dean, Neurosciences
National Institute of Mental Health and Neuro Sciences (NIMHANS)
Bengaluru



Message

The maturation of any emerging healthcare domain relies on asking precise questions and applying rigorous methodologies to answer them. By placing "Evidence in Integrative Medicine" at its core, YANTRA 2026 highlights the exacting research standards needed to advance the field and establish firm clinical credibility.

Building a robust evidence base in integrative medicine requires a multi-tiered approach—spanning foundational and mechanistic insights, rigorous clinical trials, implementation science, and real-world outcome evaluations. Achieving excellence across these tiers demands tailored study designs, precise endpoints, sound analytical frameworks, and transparent reporting. Equally crucial are reproducibility, ethical data practices, and interdisciplinary collaboration among experts with complementary skills. Ultimately, our goal must be to translate high-quality research into safe, feasible, and effective practices for patients and healthcare systems alike.

NIMHANS provides a unique ecosystem where neuroscience, psychiatry, clinical medicine, psychology, and public health intersect. YANTRA 2026 serves as a timely platform to extend this interdisciplinary synergy to integrative medicine, encouraging researchers to build methodologically sound and sustainable research programs.

I hope this conference inspires delegates—particularly early-career researchers—to refine their scientific questions, adopt robust methodologies, and contribute meaningfully to a transparent, evidence-based future.

I extend my warmest congratulations to the organizing committee and wish YANTRA 2026 a highly successful, inspiring, and intellectually productive conference.

Sathyaprabha

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Date: 8th Oct 2026

MESSAGE

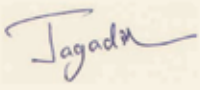
Health is experienced as a whole, although healthcare and research are often organised around individual disciplines. Behaviour, cognition, emotion, relationships, lifestyle, culture and biological processes continuously influence one another, making a whole-person perspective particularly relevant to the behavioural sciences.

Within this context, YANTRA 2026 and its theme "Evidence in Integrative Medicine" offer an opportunity to consider dimensions of health that extend beyond biological measures. Evidence in integrative healthcare should also reflect outcomes that are meaningful to individuals and communities, including quality of life, treatment engagement, behaviour change and lived experience.

Behavioural science can contribute to this evidence base by examining how people understand health, respond to interventions, sustain behavioural changes and experience care within their social and cultural environments. These perspectives can enrich both the design of studies and the interpretation of their findings.

I am particularly pleased that the conference creates a space for such perspectives to engage meaningfully with clinical and scientific disciplines. I hope the conference will strengthen attention to the human and contextual dimensions of healthcare research and encourage continued exchange among researchers and practitioners.

I extend my best wishes to the organizers, faculty, researchers, students and delegates for a productive and intellectually engaging meeting.



Dr. Jagadisha Thirthalli

Prof. Dr. D. Nagaraja

MBBS, DPM (Psy), DM (Neurology), FAMS, FIAN, FICP

Former Director

National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru

22/10/2026

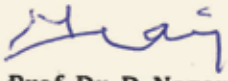
MESSAGE

It is a matter of great pride and privilege to extend my warm greetings to all esteemed delegates, keynote speakers, researchers, clinicians, and participants attending YANTRA 2026, organized by the Department of Integrative Medicine, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, in October 2026.

The theme of the conference, "Evidence in Integrative Medicine," is both timely and significant. As integrative medicine continues to evolve, generating robust scientific evidence is essential for understanding the therapeutic potential of traditional systems and for translating promising approaches into safe, effective, and evidence-informed healthcare. Such endeavours require meaningful collaboration across disciplines and the integration of clinical experience, traditional knowledge, and contemporary scientific methodologies.

YANTRA provides a valuable platform for researchers, clinicians, academicians, and practitioners to exchange knowledge, share emerging evidence, and engage in thoughtful discussions on the opportunities and challenges in advancing integrative medicine. I am confident that the deliberations during this conference will encourage rigorous research, foster new collaborations, and contribute to strengthening the evidence base for integrative approaches to health and well-being.

I wish YANTRA 2026 every success and hope that the conference will be an intellectually stimulating and enriching experience for all participants, inspiring further research and meaningful advances in the field of integrative medicine.



Prof. Dr. D. Nagaraja
MBBS. DPM(Psy)
DM (Neurology), FAMS, FIAN, FICP
Former Director, NIMHANS

Prof. Dr. B N Gangadhar

MBBS, MD, DSc

Distinguished Scientist Chair, CCRAS, Ministry of AYUSH, GOI

Former Professor Emeritus, Department of Integrative Medicine, NIMHANS, Bengaluru

Former Chairman, NMC · Former Director, NIMHANS, Bengaluru

MESSAGE

The relationship between traditional knowledge and contemporary neuroscience presents a rich field for scientific exploration, particularly in the domain of mental health. YANTRA 2026, centred on "Evidence in Integrative Medicine," provides an important setting to examine this interface with intellectual openness and methodological discipline.

Mental health research increasingly calls for questions that can accommodate biological processes alongside cognition, behaviour, lifestyle, psychosocial influences and culturally grounded understandings of health. Integrative research can contribute meaningfully when these dimensions are brought together through clearly formulated hypotheses and appropriate study designs.

A strong evidence base depends on reproducible observations, transparent methods and careful interpretation of findings. Equally important is the ability to recognise the boundaries of current knowledge and to identify questions that warrant further investigation.

I am pleased that YANTRA 2026 creates space for researchers from different intellectual traditions to engage with these challenges. I hope the conference will stimulate new lines of inquiry in mental health and neuroscience and encourage young investigators to pursue rigorous and innovative research.

I congratulate the Department of Integrative Medicine and the organizers for convening this academic platform and wish all participants a stimulating and rewarding conference.



Prof. B. N. Gangadhar
Former Director, NIMHANS

Dr. Shivarama Varambally M.D, D.Sc., FRCP Edin.
Professor, Department of Psychiatry
National Institute of Mental Health and Neurosciences,
Hosur Road Bengaluru India 560029
Wellcome Trust / DBT India Alliance Intermediate Fellow 2016 - 23



MESSAGE

It gives me great pleasure to welcome all delegates, researchers, and distinguished speakers to YANTRA 2026.

As a psychiatrist, I have always believed that meaningful advances in healthcare emerge when different systems of knowledge engage in constructive dialogue and scientific collaboration with the common goal of delivering the best possible outcome for the patient. While modern medicine has made remarkable progress in understanding and treating mental and neurological disorders, Ayurveda and Yoga offer valuable perspectives on health, disease, and wellbeing that deserve rigorous scientific exploration.

The vision behind the YANTRA series of conferences is closely aligned with this conviction. It represents an important step towards fostering a research environment in which clinicians, scientists, and practitioners from different disciplines can work together to address complex healthcare challenges. Mental and neurological disorders. Interdisciplinary research can help us explore these connections, generate new hypotheses, and develop evidence-informed approaches to patient care.

The theme *"Evidence in Integrative Medicine"* underscores the need to move beyond conceptual discussions towards systematic investigation, critical evaluation, and the translation of research findings into clinical practice. Integrating traditional knowledge with contemporary scientific methodologies offers opportunities to examine established practices, identify potential mechanisms of action, and determine their safety, efficacy, and applicability in modern healthcare. Such efforts require intellectual openness, methodological rigour, and a shared commitment to scientific integrity.

Having been associated with the Department of Integrative Medicine at NIMHANS since its inception, I am particularly pleased to witness the continued efforts to advance this vision. I see YANTRA 2026 as more than a scientific conference; it is an opportunity to strengthen a culture of interdisciplinary inquiry, encourage collaborations across institutions and disciplines, and inspire researchers to pursue questions that may not be fully addressed within the boundaries of a single field.

I wish all the participants an intellectually enriching, productive, and successful conference.

Dr. Shivarama Varambally
Organising Chair, YANTRA 2026

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MESSAGE

It gives me immense pleasure to welcome all the distinguished guests, eminent speakers, delegates, clinicians, researchers, academicians and students to YANTRA 2026, an academic initiative of the Department of Integrative Medicine, NIMHANS, centred on the theme *"Evidence in Integrative Medicine."*

As we navigate an evolving healthcare landscape, there is a growing need for approaches that are scientifically rigorous, clinically relevant and sensitive to the diverse ways in which health and illness are understood and experienced. Integrative medicine offers an important platform for bringing traditional systems of knowledge into meaningful dialogue with contemporary science, while emphasising the importance of systematic research, critical inquiry and evidence-based clinical practice.

At the Department of Integrative Medicine, NIMHANS, we recognise the value of fostering interdisciplinary collaboration to explore the potential of traditional knowledge systems and their relevance to contemporary healthcare. YANTRA 2026 provides an opportunity for clinicians, researchers, academicians and scholars to share their work, critically examine emerging evidence, address methodological challenges and explore new avenues of research at the intersection of Ayurveda, Yoga and modern medicine

I sincerely hope that the deliberations at YANTRA 2026 will inspire new ideas, strengthen scientific collaboration and contribute to the development of credible, reproducible and clinically meaningful evidence in integrative medicine. May this gathering serve as a foundation for future research initiatives, sustained academic partnerships and the responsible integration of traditional knowledge into contemporary healthcare.

I take this opportunity to express my sincere gratitude to the leadership of NIMHANS, the Ministry of AYUSH, our academic collaborators World Ayurveda Foundation, Students Partner Jignasa, invited speakers, delegates, students and research scholars for their valuable contributions and continued support. I also extend my heartfelt appreciation to the organising committee and all those who have worked diligently to bring this conference to fruition.

Kishore Kumar R
Organizing Secretary
YANTRA-2026

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Dr. M. SURESH, BSMS
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YANTRA Conference 2026

Yoga & Ayurveda in Neurosciences: Therapeutics & Research Approaches

Introduction



The YANTRA – Yoga & Ayurveda in Neurosciences: Therapeutics & Research Approaches conference, hosted by the Department of Integrative Medicine, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, represents a sustained academic endeavour to bring together diverse knowledge systems, scientific disciplines, and clinical perspectives in the field of neurosciences. Over the years, YANTRA has evolved as a multidisciplinary platform for meaningful dialogue between traditional systems of knowledge and contemporary science, with an emphasis on rigorous research, responsible integration, and translation into healthcare.

The journey of YANTRA since its inception reflects a progressive movement-from understanding traditional knowledge and its research foundations, to examining models of integration in healthcare, and subsequently towards generating and evaluating evidence for integrative approaches in neurosciences.

Yoga and Ayurveda are among the most enduring and systematically preserved traditions of Indian Knowledge Systems. Originating in India, these traditions have transcended geographical and cultural boundaries to become globally practised healthcare approaches. Their relevance today demands that they be examined and applied through rigorous scientific inquiry. Advances in neuroscience, psychiatry and systems biology, complemented by evidence from neuroimaging, neurophysiology, psychoneuroimmunology and clinical trials, increasingly highlight the therapeutic potential of Yoga- and Ayurveda-based interventions in mental health and neurological disorders. Meaningful integration into mainstream healthcare, however, requires robust models grounded in evidence, ethics, and translational research. YANTRA is conceptualised as a dedicated academic platform to meet this need.

THE YANTRA JOURNEY AT A GLANCE

2020	**Yoga and Neurosciences** *Traditions and Research Approaches* • *The Foundation*
2023	**Models of Integration in Health Care** *Yoga, Ayurveda, Integrative Medicine and Modern Biomedicine* • *The Integration*
2026	**Integrative Evidence** *Public Health* • *Clinical Research* • *Basic Science* • *The Evidence*

Aims of YANTRA

YANTRA brings scientifically validated practices from the AYUSH systems onto an international forum, facilitating dialogue with contemporary biomedical sciences and fostering interdisciplinary collaboration. The conference aims to:

- Showcase systematic and methodologically research in Yoga and Ayurveda relevant to neurosciences
- Explore therapeutic applications in psychiatric and neurological disorders, with emphasis on adjunctive and integrative care
- Delineate the neurobiological and psychophysiological mechanisms underlying Yoga- and Ayurveda-based interventions
- Discuss research methodologies, biomarkers, and translational frameworks suitable for integrative neuroscience
- Promote ethical, safe, and evidence-based integration of traditional systems within modern healthcare

YANTRA 2020

Yoga and Neurosciences: Traditions and Research Approaches

The inaugural YANTRA conference, "Yoga and Neurosciences: Traditions and Research Approaches," held in October 2020, virtually, established the foundation for this academic journey. YANTRA 2020 focused on the scientific perspectives of various schools of Yoga in mental health and Neurosciences. It laid the foundation for rigorous academic engagement between traditional Yoga knowledge and contemporary neurobiological and psychiatric frameworks.

This edition highlighted the therapeutic potential of Yoga-based interventions, emphasised the need for methodologically sound research, and positioned Yoga as a credible, scientifically examinable system within mental health and neurological care.

YANTRA 2020 thus marked an important beginning in creating a sustained forum for scientific engagement with traditional approaches to mental health and neurological wellbeing.



YANTRA 2023

Models of Integration in Health Care

Building upon this foundation, YANTRA 2023, with a theme, "Models of Integration in Health Care," was held from 23–25 November 2023 at NIMHANS, Bengaluru. The conference expanded the scope of discussion from individual therapeutic approaches towards broader models of healthcare integration.

The meeting brought together experts and institutions working across Yoga, Ayurveda, Integrative Medicine and modern biomedicine, facilitating dialogue on clinical practice, research, education, and healthcare delivery.

YANTRA 2023 thereby strengthened the platform for multidisciplinary engagement and highlighted the importance of developing scientifically credible and contextually appropriate models through which traditional knowledge and contemporary healthcare can meaningfully intersect.

YANTRA 2026

Advancing Towards Integrative Evidence

Continuing this evolving journey, YANTRA 2026 carries the overarching theme "Evidence in Integrative Medicine." It seeks to advance the discourse from the concept of integration towards the generation, evaluation and application of evidence.

THREE INTERCONNECTED DOMAINS OF INTEGRATIVE EVIDENCE

I	II	III
Public Health	**Clinical Research**	**Basic Science Research**
Appropriate evaluation and implementation frameworks in public health	Rigorous evaluation of interventions, patient-centred outcomes, clinical trials and translational research.	Biological foundations: neurobiology, biomarkers, molecular research and omics to study mechanisms of action.

Integrative Evidence from Public Health

This domain considers the role of integrative approaches within population health, prevention and health systems. It provides an opportunity to examine how traditional knowledge and practices may contribute to health promotion and preventive strategies, while recognising the importance of appropriate scientific evaluation, implementation frameworks and health-system perspectives.

Integrative Evidence from Clinical Research

Clinical research forms a central pillar of evidence generation in Integrative Medicine. This domain focuses on rigorous evaluation of interventions, patient-centred outcomes, clinical trials, translational research and the development of evidence-informed approaches to healthcare. It provides a platform to examine both the opportunities and methodological challenges involved in generating clinically meaningful evidence for integrative interventions.

Integrative Evidence from Basic Science Research

The basic science domain seeks to explore the biological foundations underlying integrative approaches. Contemporary methodologies in neuroscience, neurobiology, biomarkers, molecular research, genomics and related disciplines provide opportunities to investigate mechanisms of action and biological correlates of traditional interventions. Such research can contribute to a deeper understanding of the interface between traditional concepts and modern scientific frameworks.

YANTRA 2026 AT A GLANCE

Dates	29–30 October 2026 (Thursday–Friday)
Venue	NIMHANS Convention Centre (Halls A, B and C), Bengaluru
Organiser	Department of Integrative Medicine (IMD), NIMHANS — a flagship outreach initiative of the Institute
Format	Two-day international conference: plenaries, invited symposia, panel discussions, parallel sessions, oral and poster presentations, and valedictory
Hands on training workshop	MATHANAM (26th -28th October 2026)— a 3-day hands-on workshop on Integrative Approaches in Ethnopharmacology for Neuropsychiatric Diseases - analysis of medicinal plants, proteomics, and rational drug discovery and development related to Neuropsychiatric diseases
Hands on training workshop 1:	Mind–Body Medicine (29th October 2026)
Hands on training workshop 2:	Applications of Indian Knowledge Systems in Mental Health (29th October 2026)
Hands on training workshop 3:	Finding Inner Self – Developing Consciousness-Centered Research Methods (29th October 2026)

Anticipated Impact and Deliverables

MATHANAM will deliver structured training materials and documented protocols, a conference abstract book and proceedings, a multidisciplinary network for evidence-based integrative medicine, a policy brief outlining research priorities, and a digital repository of educational resources. It aims to strengthen research capacity, critical appraisal and interdisciplinary collaboration, encourage multicentre studies and postgraduate research, and promote rigorous, evidence-informed integration of Ayurveda and Yoga with modern psychiatry and neuroscience. The initiative will also reinforce NIMHANS as a national resource centre for evidence-based integrative medicine.

A Continuing Academic Journey

The progression of YANTRA may be viewed as a continuum:

YANTRA 2020 *Yoga and Neurosciences: Traditions and Research Approaches*

↓

YANTRA 2023 *Models of Integration in Health Care*

↓

YANTRA 2026 *Integrative Evidence*

This progression reflects a widening and deepening of the academic conversation. From examining traditions and research approaches, YANTRA moved towards exploring models through which different systems of healthcare may be integrated, and now advances towards a systematic examination of evidence across public health, clinical research and basic science.

Importantly, the pursuit of integrative evidence does not imply the uncritical assimilation of different knowledge systems. Rather, it calls for methodological rigour, scientific openness, ethical responsibility and respect for the epistemological foundations of diverse traditions. The challenge and opportunity lie in developing research frameworks that are sufficiently rigorous to meet contemporary scientific standards while remaining sensitive to the complexity and context of traditional systems of knowledge.

Towards the Future of Integrative Neurosciences

YANTRA 2026 therefore represents not merely another edition of a continuing conference, but another step in an evolving academic endeavour. By bringing together perspectives from Ayurveda, Yoga, Integrative Medicine, psychiatry, neurology, neuroscience, public health, and biomedical sciences, the conference seeks to strengthen interdisciplinary scholarship and foster meaningful collaborations.

The future of Integrative Medicine will depend upon the ability to ask scientifically relevant questions, employ appropriate and rigorous methodologies, generate reproducible evidence and translate credible findings into ethical and patient-centred healthcare. Equally important will be the development of researchers and clinicians who can engage constructively across disciplinary boundaries.

In this context, YANTRA serves as a forum for dialogue, discovery, and collaboration. Its continuing journey—from tradition to integration and from integration to evidence—reflects an enduring commitment to advancing knowledge at the intersection of traditional wisdom and contemporary neuroscience.

As YANTRA 2026 brings together researchers, clinicians, academicians, practitioners and students from diverse disciplines, it carries forward a vision of Integrative Medicine grounded not only in the preservation of knowledge, but also in its critical examination, scientific validation, responsible application and continued evolution.

YANTRA 2026 thus marks another milestone in the continuing pursuit of evidence-informed, ethical and scientifically rigorous Integrative Neurosciences.



Department of Integrative Medicine

About the Department



The Department of Integrative Medicine at the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, brings together Ayurveda, Yoga, and modern medical science, with a special focus on mental health and neurosciences. Established on 30 October 2019, the Department provides a shared clinical, academic and research framework for the study and application of Ayurveda and Yoga alongside modern medicine.

The Department aims to understand how traditional healthcare practices can contribute to contemporary healthcare through careful clinical practice and scientific evaluation. Its multidisciplinary team brings together expertise in Ayurveda, Yoga, Psychiatry and related sciences. The Department was initially led by Dr. Shivarama Varambally, Professor of Psychiatry, as In-charge Head and is now led by Dr. Kishore Kumar R, Professor of Ayurveda.

Goals of the Department



The Department aims to integrate Ayurveda, Yoga and modern medicine to provide comprehensive, patient-centred care for neurological and mental health conditions. It seeks to strengthen clinical services, advance scientific research, develop evidence-based integrative healthcare approaches and educate and train healthcare professionals. Through national and international collaborations, the Department also works to share knowledge and make integrative healthcare more accessible to the community.

By bringing clinical care, research and education together, the Department strives to advance evidence-based integrative medicine and improve the quality of life of individuals and communities.

Clinical Services: Care for Mental and Neurological Health

Since its establishment in October 2019, the Department has developed clinical services that bring together Yoga, Ayurveda, and modern medical care for people with mental and neurological conditions. The following figures summarize the services reported for 2019–2025.

10,013 patients served through outpatient and inpatient services
63,190 Ayurvedic procedures provided through Panchakarma services, 2021–2025
128,639 patient-session visits across 34,033 Yoga therapy sessions, October 2019–November 2025

Outpatient, Inpatient and Community Services

The Department provides outpatient consultations, inpatient care and Ayurvedic therapies, including Panchakarma, according to individual patient needs. Yoga therapy is offered as part of patient care to support rehabilitation and overall well-being. The Department also offers free daily Tele-Yoga sessions from 6:30 AM to 7:30 AM for general public, staff, and students. Together, these clinical and community outreach services support a holistic, patient-centred approach while contributing to the scientific evaluation of traditional healthcare practices.

Research: Building Evidence for Integrative Healthcare

Research is a central part of the Department's work and builds on the questions arising from clinical practice. Studies examine the clinical effects and possible mechanisms of Yoga- and Ayurveda-based interventions for mental and neurological health. They combine clinical outcomes with neurophysiological, neuroimaging, immune-inflammatory, autonomic and other biological measures.

167 peer-reviewed publications on Yoga/Ayurveda in mental health and neurosciences with at least one NIMHANS author
₹24.57 crore total funding reported across major research projects

Major Research Projects

Project	Principal Investigator	Funding Agency
YANTRA – Yoga, Ayurveda and Neuroscience: Translational Research Accelerator; Centre of Excellence in AYUSH Research	**Dr. Kishore Kumar R**	Ministry of AYUSH, Ayurswasthya Yojana
OUDARYAM – Opioid Use Disorder and Role of Yoga as an Adjunct in Management: Trial of Effectiveness and Mechanisms	**Dr. Hemant Bhargav**	DBT/Wellcome Trust India Alliance
Centre for Mind-Body Medicine Interventions through Yoga (CCMBY)	**Dr. Hemant Bhargav**	CCRYN, Ministry of AYUSH
Ayurveda therapeutic regimen as add-on to optimized conventional management of Parkinson's disease	**Dr. Umesh C**	CCRAS, Ministry of AYUSH
SAMYAMA – Meditation and Mental Health Research	**Dr. Bharath Holla**	CSR – Chola Mandalam Group

Project	Principal Investigator	Funding Agency
Yoga for achieving United Nations Sustainable Development Goals	**Dr. Aarti Jagannathan**	CCRYN, Ministry of AYUSH
YES – Yoga-Based Extension Services for community mental health	**Dr. Aarti Jagannathan**	ICMR, New Delhi
Addressing Multimorbidity in Older Adults through Yoga (AMODA)	**Dr Hemant Bhargav**	ICMR, New Delhi
Yoga through Sanskrit Project: Neuro-Hemodynamic Effects of Vedic Mantra: Merging Indian Traditions and Contemporary Neuroscience	**Dr. Bharath Holla**	Central Sanskrit University through Ashtadashi project

Research Contributions and Collaborations

Evidence-based Yoga modules have been developed for more than 10 neuropsychiatric conditions.

The Department's research includes randomized controlled trials, clinical studies, systematic reviews and investigations of underlying mechanisms across mental health and neurological conditions.

Research themes include depression, schizophrenia, Parkinson's disease, migraine, ADHD, opioid use disorder, sleep and cognitive dysfunction, maternal mental health, chronic pain and community mental health.

Education and Professional Training

Alongside clinical services and research, the Department supports the next generation of clinicians and researchers through degree programmes, fellowships, short courses and inter-institutional training. Its academic programmes include:

Courses
PhD in Integrative Medicine
MD Manas Roga (Ayurveda Psychiatry)
MSc Yoga Therapy
Post-doctoral fellowships in Integrative Psychiatry
Post-doctoral fellowships in Integrative Mental Health.
A one-year Fellowship in Integrative Medicine for MBBS doctors

Training and Capacity Building

The Department's training initiatives extend this knowledge to healthcare professionals. The programme, "Basics of Yoga Therapy for Mental Health Professionals" has trained more than 150 mental health professionals, including psychiatrists, psychologists to to use personalized yogic tools to manage specific health conditions, reduce stress, and support healing.

The Online Certificate Course in Integrative Medicine has trained more than 300 professionals, with participation from faculty at AIIMS and other medical institutions across India.

The Department also regularly trains external trainees AYUSH medical colleges.

An MoU with AIIMS Jodhpur has been formalized as an inter-institutional collaborative framework. Under this arrangement, MD Family Medicine residents from other institutions have opportunities to undertake a one-month training as a part of their rotation postings in the Department of Integrative Medicine at NIMHANS.

National Leadership and Knowledge Sharing:

- The Department shares its experience and research through national and international academic forums, including the international YANTRA conferences organized in 2020 and 2023.
- In November 2023, the Health Ministry directed the AIIMS institutions to examine the NIMHANS model for potential adoption. Detailed proposals were subsequently shared with PGIMER Chandigarh and AIIMS Rishikesh, Raipur, Bibinagar, and Patna to facilitate its replication.The Department's model has also been discussed in peer-reviewed literature as a potential model for wider adoption.
- The Department contributed to national tele-Yoga guidelines with CCRYN, Ministry of AYUSH.
- Faculty members have contributed to national committees and initiatives on Yoga for children during COVID-19, Yoga for de-addiction, Yoga for stroke, and Yoga and the UN Sustainable Development Goals.

Ongoing PhD Studies in the Department

The Department's research and training priorities are reflected in its ongoing PhD studies. These projects bring together traditional healthcare knowledge and contemporary scientific methods to investigate clinical outcomes and possible mechanisms across mental health and neurological conditions. Collectively, they aim to strengthen the evidence base for integrative medicine and nurture researchers with interdisciplinary expertise.

	Ongoing PhD Study
1.	Development and Validation of Ayurveda Dosha based Unmāda Severity Scale (ADUSS)
2	The Add-on Effect of Tele-Yoga on Generalized Anxiety Disorder: A Randomized Controlled Trial on Efficacy and Mechanisms
3	Utility of a validated tele yoga program in Hirayama disease: a 9 month follow up matched controlled study
4	Effect of Yoga therapy on Autonomic Functions in Multiple Sclerosis: A Randomized Controlled Trial
5	Effect of Brahmi ghrita on cognitive, neurodegenerative and neurotrophic parameters in Mild Cognitive Impairment – A Double-blind Randomized Placebo-controlled Trial

	Ongoing PhD Study
1.	Development and Validation of Ayurveda Dosha based Unmāda Severity Scale (ADUSS)
2	The Add-on Effect of Tele-Yoga on Generalized Anxiety Disorder: A Randomized Controlled Trial on Efficacy and Mechanisms
3	Utility of a validated tele yoga program in Hirayama disease: a 9 month follow up matched controlled study
6	Effect of Virechana Karma on vagal tone, gut Microbiota, and metabolic parameters in schizophrenia: A clinical observational study.
7	Adaptation of the Validated Yoga Module for Depression: Standardizing Delivery through a Therapist Training Manual with Fidelity, Competence, and Reliability Testing.
8	Phytochemical profiling of Nardostachys jatamansi and its mechanistic role in the gut-brain axis, epigenetics, neuroplasticity and neuroinflammation in major depressive disorder: a randomized controlled trial
9	Effect of a Validated Yoga Intervention on Cognitive Functions in Patients with Opioid Use Disorder: A Randomized Controlled Study
10	Pilot Feasibility of a Sequential Multiple Assignment Randomized Trial (SMART) for Depression: Integrating Yoga, Ayurveda, and Escitalopram with Biomarker Profiling.
11	Efficacy of an 8-week Pranayama-Based Yoga Intervention versus Active control in Patients with Anxiety Disorders: A Randomized Controlled Trial
13	Development of an Add-on Integrative Medicine Intervention for Benzodiazepine Use Disorder: A Pilot Sequential Multiple Assignment Randomized Trial (SMART)
14	Add-on Effect of Integrative Yoga and Ayurveda treatment in the Management of Cognitive Dysfunction in Schizophrenia – An assessor blind randomized controlled trial.
15	Effect of Add on Integrative Yoga and Ayurveda Management (IYAM) on Clinical, Imaging, and Molecular Changes in Relapse Remitting Multiple Sclerosis Patients- A Randomized Controlled Trial
16	Mother Baby yoga for maternal sensitivity and bonding among postpartum women with severe mental illness: RCT.
17	Co-designing and feasibility testing of an Integrative intervention for improving the well-being of caregivers of persons with severe mental disorders in rural Karnataka using Theory of change approach
18	Neural, Psychological, and Physiological Correlates of Long-Term Vedic Chanting Student

Vision and Mission of the Department:

The Department of Integrative Medicine, NIMHANS, envisions advancing integrative mental health and neurosciences through patient-centred, safe, and evidence-based care, combining Ayurveda, Yoga, and modern neuropsychiatry. Its mission is to promote health and well-being, strengthen interdisciplinary research and collaborations, build skilled human resources, and translate traditional knowledge into innovative clinical practices through scientific research and integration into mainstream healthcare.

At the heart of this vision and mission lies the timeless Vedic ideal, "आ नो भद्राः क्रतवो यन्तु विश्वतः" — "Let noble thoughts come to us from all directions." This guiding philosophy reflects the Department's commitment to embracing diverse streams of knowledge, fostering interdisciplinary collaboration, and subjecting traditional wisdom to rigorous scientific inquiry to advance evidence-based integrative healthcare.

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Yoga and Ayurveda in Neuroscience: Translational Research Accelerator Program. YANTRA

(Centre of Excellence under the Ayurswasthya Yojana, Ministry of AYUSH, Government of India)



Mental and neurological disorders remain among the most complex challenges in modern healthcare. Their reach extends well beyond symptoms. They reflect an intricate interplay of brain function, cognition, genetics, immune activity, metabolism and environment. Making sense of them calls for an approach that draws together clinical observation, biological investigation and the lived experience of the people affected.

It is against this backdrop that YANTRA – Yoga and Ayurveda in Neuroscience: Translational Research Accelerator has taken shape at the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru. Its premise is simple to state and demanding to pursue: traditional approaches to health deserve to be examined with the same rigour as any other, and contemporary neuroscience offers the tools to do so.

Building a Shared Research Framework

The foundation was laid in 2019 with the establishment of the Department of Integrative Medicine at NIMHANS, which created an institutional home where Ayurveda, Yoga and contemporary biomedicine could work within a shared research framework. In 2022, the Institute was designated a Centre of Excellence in AYUSH Research under the Ayurswasthya Yojana of the Ministry of AYUSH, Government of India. The Centre was inaugurated by the then Union Minister for AYUSH, Shri Sarbananda Sonowal, a milestone in the Institute's efforts to advance integrative healthcare research.

YANTRA builds on this foundation. It investigates the clinical efficacy, safety and possible neurobiological mechanisms of Integrated Yoga and Ayurveda Management (IYAM) as an adjunct to conventional care. At its heart lies a question that is clinically relevant and scientifically challenging: *can traditional approaches to health be studied through contemporary neuroscience, and can that work yield reliable evidence about their effects, their mechanisms and their relevance to individual differences?*

Rather than treating traditional knowledge and modern biomedical research as separate worlds, YANTRA brings them into a common framework of measurable outcomes, systematic investigation and scientific validation.

Aim and Objectives of YANTRA

The overarching aim is to strengthen the scientific understanding of Ayurveda and Yoga through translational research in neuroscience and integrative mental healthcare. The programme looks beyond whether an intervention produces clinical change. It asks whether such change is accompanied by measurable biological or physiological differences, and whether those patterns vary from one person to the next.

This translates into six objectives. YANTRA will evaluate the efficacy and safety of IYAM using standardised clinical outcomes and appropriate safety monitoring, and explore the mechanisms behind any change by relating it to biological, molecular, physiological and brain-related measures. It will examine whether Ayurvedic *Prakriti*, or constitution, is associated with genetic and epigenetic patterns, immune-inflammatory markers, gut microbiome profiles and neurophysiological measures. It will study people with neuropsychiatric disorders, their first-degree relatives and healthy volunteers to understand disease-related and familial patterns. It will build a digital database that combines clinical, cognitive, molecular, neuroimaging, psychophysiological and gut–immune information for integrated analysis.

Together, these objectives describe a translational pathway: clinical observations inform biological investigations, findings generate testable hypotheses, and further research establishes whether they are reproducible and clinically meaningful.

A Unified Research Framework Across Four Conditions

YANTRA focuses on four major disease groups: mood disorders, schizophrenia, Alzheimer's dementia and multiple sclerosis. Across these conditions, the programme brings together clinical and cognitive assessments with molecular, genomic, epigenetic, neuroimaging, neurophysiological and immune-inflammatory investigations. This multiparametric approach enables researchers to examine disease-associated biological patterns, understand individual differences and explore how these relate to clinical presentation and treatment response. It also supports the investigation of the potential effects, safety and underlying mechanisms of Integrated Yoga and Ayurveda Management (IYAM) as an adjunct to conventional care. Across all four disease groups, the broader aim is twofold: to generate condition-specific evidence and to explore wider questions concerning individual variability, biological mechanisms and the possible relationship between Ayurvedic constitutional concepts and measurable features of health and disease.

Among all four, the aim is twofold: to generate condition-specific evidence, and to probe broader questions about individual variability, biological mechanisms and the possible relevance of Ayurvedic constitution to measurable features of health and disease.

A Multiparametric Approach to Understanding Health

What distinguishes YANTRA is its multiparametric approach: combining several kinds of information from the same individual to build a fuller picture than any single measure could provide.

The clinical foundation is standardised rating scales and cognitive assessments, applied as each study protocol specifies, to capture symptom severity, memory, attention and wider functioning. These give biological findings the clinical context they need to be interpreted. Alongside them, participants undergo assessment of *Prakriti*, allowing researchers to ask whether constitutional characteristics correspond to differences in clinical presentation, biological profile or brain-related function.

Blood-based analyses add a molecular layer through DNA methylation, gene expression and secretome profiling, which together open a view onto genetic variation, the regulation of genes and the molecules cells release. Neuroimaging and neurophysiological recordings contribute information on brain structure, function and physiological activity. Stool metagenomic analysis characterises the gut microbial community and, integrated with relevant metabolite and biological assessments, supports study of the gut–brain axis, the two-way communication between the gastrointestinal system and the brain. Immune-inflammatory and cardio-metabolic parameters are examined together with physiological measures such as heart rate variability (HRV), an indicator of autonomic regulation.

The value of this design lies not in the volume of data but in how the domains relate to one another. Patterns that would be difficult to interpret when each variable stands alone may become visible when clinical, molecular, microbial, physiological and brain-related measures are read together.

Prakriti, Biology and the Brain: Investigating Research Associations

YANTRA explores whether Ayurvedic constitutional concepts, particularly *Prakriti* and *Dosha*, are associated with measurable biological and neurological features. By integrating genetic and epigenetic profiles, gut microbiome characteristics, immune-inflammatory markers, cognition and brain-related measures, the programme seeks to understand individual variability in health and disease. Here, traditional concepts serve as sources of testable scientific questions, with findings requiring rigorous analysis and independent validation. Genetic variants should not be assumed to determine Prakriti, and observed associations alone cannot establish causation.

The "Doshic-Brain" Framework: A Research Concept

The proposed "Doshic-Brain" framework investigates whether Ayurvedic concepts have reproducible associations with brain structure, function and physiology. Supported by an integrated database of clinical, biological and neurological measures, this approach aims to bridge traditional knowledge and contemporary neuroscience. The framework remains **a** research concept, not an established neurological classification; its scientific and clinical relevance will depend on robust evidence, reproducibility and independent validation.

Advancing Evidence-Based Integrative Healthcare

YANTRA represents a concerted effort to bring traditional knowledge into conversation with contemporary clinical research and neuroscience. Its significance lies not only in testing an integrative intervention but in building a framework within which clinical, molecular, microbial, physiological and brain-related information can be studied together.

For clinicians and researchers, that framework opens questions of growing importance. Why do people with the same diagnosis present so differently? Are there measurable biological patterns behind these differences? Can changes observed during an intervention be traced to specific biological or physiological processes? And can traditional constitutional concepts be examined through methods that withstand scientific scrutiny and replication?

The programme is equally an investment in people. By training clinician-scientists and PhD researchers to work across Ayurveda, Yoga, psychiatry, neurology, neuroscience and molecular biology, YANTRA develops the expertise needed to interpret complex datasets and turn findings into meaningful clinical questions.

Ultimately, the worth of integrative healthcare must be established through rigorous evaluation of efficacy and safety, transparent reporting and independent validation. YANTRA's potential lies in laying the scientific foundations for that evaluation, while staying open to the findings, limitations and new questions that research may reveal.

By bringing Ayurveda, Yoga and contemporary neuroscience into a shared research framework, YANTRA seeks to advance a vision of integrative healthcare that is holistic in perspective, rigorous in method and guided by evidence.

Its contribution will be judged not by assumptions about traditional concepts, but by the quality of the questions it asks, the strength of the evidence it generates and the relevance of that evidence to the future of mental and neurological healthcare.

YANTRA 2026

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CCRYN INITIATIVES IN INTEGRATIVE MEDICINE

CCRYN Initiatives in Integrative Medicine: Intramural Research Projects

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The Central Council for Research in Yoga & Naturopathy (CCRYN), under the Ministry of Ayush, conducts intramural research to generate scientific evidence for yoga and naturopathy and to support their integration into mainstream healthcare. These projects are carried out at CCRYN headquarters and in partnership with leading institutions across India, including AIIMS New Delhi, AIIMS Rishikesh, Dr RML Hospital, Safdarjung Hospital, VPCI Delhi, IIT Mandi, SRIHER Chennai, Kokilaben Hospital Mumbai, DPU Pune and NIMHANS. The research spans cardiopulmonary health (pulmonary hypertension, cardiac rehabilitation, hypertension, interstitial lung disease), neurology (vascular dementia, chronic tension headache, brain function), mind-body and mental health (medically unexplained physical symptoms, stress and well-being), musculoskeletal disorders (knee osteoarthritis), immunology, and public health (COVID-19, school children, police recruits, use of complementary medicine and sustainable development goals). Study designs include multicentre randomised controlled trials, mechanistic studies, surveys, and systematic and umbrella reviews. Key projects include a multicentre trial of yoga in pulmonary hypertension, yoga-based cardiac rehabilitation assessed by ballistocardiography, yoga with pulmonary rehabilitation in interstitial lung disease along with its molecular basis, metabolomic profiling of innate immune cells after the Common Yoga Protocol, and yogic kriya effects on brain function. Evidence syntheses on mud therapy for knee osteoarthritis and on the reporting quality of yoga trials in cancer add to the evidence base. Findings from completed studies, including national and global surveys on lifestyle, yoga and mental health during the COVID-19 pandemic, have been published in peer-reviewed journals, informing clinical practice, policy and public awareness of yoga and naturopathy.

CCRYN Collaborative Centres for Mind-Body Intervention through Yoga (CCMBIY)

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The Central Council for Research in Yoga & Naturopathy (CCRYN), under the Ministry of Ayush, established the Collaborative Centres for Mind-Body Intervention through Yoga (CCMBIY) to embed yoga research, clinical services and training within premier medical institutions. The first phase set up centres at AIIMS Rishikesh, AIIMS Raipur and PGIMER Chandigarh, and the second phase extended the network to AIIMS New Delhi, AIIMS Bhopal, AIIMS Jodhpur, AIIMS Bibinagar, NIMHANS and S-VYASA, Bengaluru. Each centre works with clinical departments to test yoga as an add-on to standard care through randomised controlled trials, module development and validation, and mechanistic studies. Research areas include mental health and addiction (depression, alcohol and opioid use disorders, healthcare-worker burnout), neurology (migraine, tension-type headache, Hirayama disease, neuroimaging of mantra meditation), cardiometabolic disorders (prediabetes, diabetes, obesity, coronary artery disease), chronic kidney disease, oncology (prehabilitation during chemotherapy, survivorship, post-mastectomy pain), musculoskeletal pain, perioperative care, allergic rhinitis, women's and maternal health, and geriatric falls. Several studies explore mechanisms such as stem cells, gut microbiome, immunometabolism and arterial stiffness. Outcomes from the first phase have been published in peer-reviewed journals, including trials on yoga in pregnancy and fear of falling in older adults, evidence that the Common Yoga Protocol raises circulating stem cells, and validated yoga modules for healthcare-worker burnout that led to the hospital "Y-Break". The centres have also produced academic books on the neuroscience of yoga. CCMBIY thus builds a sustainable, hospital-based platform for integrative medicine in India.

CCRYN Initiatives: Common Yoga Protocol improves cognitive functions and neural connectivity: A randomized controlled fMRI study in healthy adults

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The UN's International Day of Yoga promotes global participation through the 45-minute Common Yoga Protocol (CYP), suitable for all age groups. This randomized controlled study in Pune, India recruited 139 non-alcoholic and nonsmoking healthy adults (18–55 years) to either a 45-day CYP intervention or waitlist control to study effect of CYP. Primary outcome was affect assessed using the Positive and Negative Affect Schedule (PANAS). Secondary outcomes included cognitive domains assessed using the Digit Symbol Substitution Test (DSST), Digit Span test, and Pittsburgh Sleep Quality Index (PSQI), and resting-state fMRI in a subgroup (n=50) to assess changes in connectivity of large-scale brain networks. Data were analysed using Intention to Treat using ANCOVA with baseline value as a covariate.

CYP practice significantly improved positive affect (Δ=4, $p<0.001$), reduced negative affect (Δ=-3.4, $p<0.001$), enhanced digit span scores (total Δ=1.1, $p=0.01$; forward Δ=0.84, $p<0.001$), and improved sleep quality (Δ=-1.2, $p<0.001$). Backward span gains were nonsignificant, and DSST showed no group differences. fMRI revealed increased connectivity in sensorimotor, visual, cerebellar, language, salience, and dorsal attention networks favouring yoga. Forty-five days of CYP practice significantly improves affect, sleep quality, selected cognitive functions, and neural network connectivity in healthy adults.

Key words: Yoga, Cognition, Brain health, fMRI , Neural connectivity, Sleep

INTEGRATIVE INITIATIVES IN AIIMS

Integrative Medicine in Tertiary Healthcare: A Public Academic Health System Model

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Background: Integrating traditional systems of medicine with conventional tertiary care requires moving beyond ideological comparisons toward evidence-informed, system-wide synthesis. At AIIMS Bibinagar, this integration is structured as a coordinated healthcare model rather than an adjunct service. Three registered models guide the work: the Banyan Tree (Ayurveda as roots, modern medicine as trunk, with personalized medicine, One Health and AI/ML in the canopy), Ashtang Yoga applied to education, care and research, and SAMMAAN (Ayurveda, Yoga, Unani, Siddha, Homeopathy, Naturopathy, mind-body medicine and allopathy in one salutogenic alliance).The institutional framework is guided by these three conceptual models paradigms—which link classical systems (Ayurveda, Yoga, Unani, Siddha, Homeopathy, and Naturopathy) with modern allopathic disciplines, data science, and a One Health approach. Implementation across the care continuum is anchored by the CCMBIY, established with the CCRYN (Ministry of AYUSH), aligning primary outreach with tertiary clinical pathways.

Implementation & Operational Domains: Curricular Integration & Capacity Building: Experiential mind–body training (yoga, pranayama, and mindfulness) has been incorporated into foundational training across undergraduate medical, nursing, and allied health curricula. The Ashtang Yoga paradigm is utilized in academic training to contextualize research ethics, critical appraisal, and communication. Continuing professional education includes regional hybrid CMEs, national conclaves, and postgraduate modules intersecting with global health and One Health epidemiology.

Clinical Translation: Outpatient integrative services operate alongside conventional specialty clinics, utilizing standardized lifestyle and yoga-based patient education protocols. Focus areas include maternal–child health (prenatal and postnatal care), geriatric health, musculoskeletal disorders, and common non-communicable conditions such as type 2 diabetes, essential hypertension, metabolic dysfunction, and polycystic ovary syndrome.

Community Engagement: Public health extensions focus on preventive lifestyle interventions across diverse cohorts—including rural school populations, maternal health cohorts, and underserved tribal communities—coupled with public health awareness campaigns.

Research Infrastructure & Clinical Trials: Translational validation is driven by structured clinical protocols, including randomized controlled trials evaluating yoga-based interventions in oncology prehabilitation, allergic rhinitis, perioperative care, insulin sensitivity, and metabolic–microbiome interactions. These six CCMBIY–CCRYN studies were approved across six departments (five RCTs, one mixed-methods). These studies leverage institutional facilities such as the Multidisciplinary Research Unit (MRU), VRDL and a sanctioned BSL-3 laboratory and collaborative platforms to generate rigorous clinical and biomarker, and a base of 1,156 publications, 129 funded projects and about ₹64 crores in research funding endpoints.

Outlook: The long-term trajectory focuses on developing a multi-site clinical evidence repository, standardizing reproducible integrative care protocols for non-communicable diseases, and establishing a scalable regional care model for mainstream academic health centers.

Integrative Medicine at AIIMS Jodhpur: Building an Evidence-Based Framework for Yoga and AYUSH Interventions in Public Health

***Dr Naveen K H**, Additional Professor of Department of CMFM, AIIMS, Jodhpur*

Integrative medicine is increasingly recognized as a viable strategy to address the rising burden of chronic non-communicable diseases and mental health disorders in India. AIIMS Jodhpur has developed a comprehensive, evidence-driven integrative medicine ecosystem spanning clinical service, education, and research.

Clinically, the Department of AYUSH provides routine outpatient services including Ayurveda, Panchakarma, Unani therapies, cupping, acupuncture, homeopathy, and varmam therapy for autism. An Integrative Medicine OPD functions within General Medicine, complemented by daily yoga sessions in the Psychiatry inpatient ward and daily services at the urban satellite health centre through the Department of Community Medicine and Family Medicine. Structured cross-referral pathways exist with Medicine, Psychiatry, Neurology, Orthopaedics, and PMR. "Y-Break" wellness sessions promote healthcare worker well-being.

Academic initiatives include an informal MPH

course on Spirituality for Self-Transformation, self-knowledge and meditation sessions, structured yoga modules for MBBS and nursing students, integrated teaching on the application of Yoga and Ayurveda in chronic diseases and mental health, and Unconventional Learning Experiences (UNCLE) sessions, which have received positive student feedback.

Research is a major pillar, supported by the ICMR–AYUSH Advanced Centre for Integrative Health Research, with approximately ₹6 crore allocated to three projects addressing mild cognitive impairment in older adults, knee osteoarthritis, and chronic obstructive pulmonary disease through Ayurveda-based regimens and/or yoga. The Collaborative Centre for Mind-Body Interventions through Yoga, established in collaboration with CCRYN, has ₹2.5 crore in funding over five years and supports five research projects, including a collaboration with NIMHANS on yoga and opioid use disorders. An anaemia trial has also been completed under the ICMR–AYUSH initiative.

This symposium presentation will delineate the institutional model, emerging evidence, and policy implications for embedding integrative initiatives within tertiary care and public health systems.

Keywords: Integrative medicine; Yoga; AYUSH; Mind-body interventions; Public health; Evidence-based practice; NCDs; Mental health

Translating Integrative Medicine Initiatives into Action Across AIIMS: From Policy to Practice.

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Background: India's National Health Policy 2017 envisages pluralism and integration of AYUSH with biomedical care through co-location, cross-referral and integrative practices. Translating this policy intent into dependable institutional services requires more than placing different systems under one roof: it calls for clinical collaboration, defined governance, patient safety, research and evaluation. AIIMS institutions vary in their existing AYUSH capacity and organizational readiness, creating a need for practical, adaptable implementation approaches.

Experience at AIIMS Rishikesh: IM Journey at AIIMS Rishikesh started In April 2025.**Department of Integrative Medicine at AIIMS Rishikesh-** formally inaugurated on **15 April 2025**, by union health minister Sh J P Nadda ji Department of Integrative Medicine marked a historic milestone in blending Indian healing systems of AYUSH like

yoga,ayurveda and siddha , with contemporary medicine. It is the first among all AIIMS institutions to incorporate integrative medicine into routine OPD and IPD services, fostering collaborative, patient-centered treatment strategies. Housing advanced research centers supported by ICMR; AYUSH-ICMR Advanced centre for Integrative health research (AI-ACHIR) for Geriatric Health, externship programmes, fellowship programs and interdisciplinary training was inaugurated, formalizing an institutional platform for collaborative care. Reported activities include AYUSH outpatient services, an integrative medicine clinic, physician discussions and collaborative specialty clinics, alongside teaching and research initiatives.While the deptt is still in state of infancy unlike NIMHANS that has a successful IM model for mental health disorders, AIIMS Rishikesh model aspires to work on IM in non communicable /lifestyle related diseases in all age groups including older adults.

These developments illustrate several operational elements relevant to policy translation: an institutional home for AYUSH services, engagement with biomedical departments, opportunities for shared clinical review, and linkage between service delivery, education and research. They also underline the importance of distinguishing service availability from demonstrated effectiveness. Integration should be patient-centred and evidence-informed, preserve informed choice, clarify the responsibilities of each practitioner, and include appropriate screening, documentation, referral and adverse-event monitoring.

Way forward: A national scale-up should proceed as a structured implementation programme rather than a uniform mandate to establish identical departments at every AIIMS. First, each interested institute should undertake a readiness assessment covering existing AYUSH personnel and services, clinical partners, leadership, infrastructure, referral processes, research and ethics capacity, and patient demand. Second, participating institutes should co-design a minimum operational framework with locally adaptable pathways. This framework should specify governance and accountability; eligibility and exclusions; consent and communication; the role of standard biomedical care; practitioner scope; referral and escalation criteria; medicine and therapy safety; and documentation.

Third, institutes should pilot a limited number of clearly defined clinical pathways selected for local relevance and available expertise. Each pathway should specify the intervention, comparator or usual-care context where appropriate, outcomes, follow-up and safety surveillance before implementation. Fourth, evaluation should include both

implementation and clinical measures: readiness, reach, uptake, referral completion, acceptability, fidelity, workforce requirements, costs, adverse events and relevant patient-reported and clinical outcomes. Results, including null or unfavourable findings, should be disseminated transparently and used to revise the model. Finally, a network of participating AIIMS could share protocols, training resources, ethics and safety tools, and implementation data, with an identified coordinating hub supporting peer learning rather than imposing a single template.

AIIMS Rishikesh offers an emerging institutional experience in bringing AYUSH services, collaborative clinical activity, education and research together. Its value for other institutes lies not in assuming that the model can be copied unchanged, but in examining its components and testing which are transferable under different institutional conditions. A phased, measurable and locally adaptable approach can help convert the policy commitment to integration into accountable practice—moving from co-location towards coordinated care, while building evidence and protecting patient choice and safety. While the distinguished global universities and hospitals like Cleveland clinic,Harvard etc have starting looking into integration of different healing systems for the benefit of patients internationally, health care professionals back in India needs to rise above the debate of mixopathy and start recognizing the already generated evidence on Indian healing system and modern medicine integration.

If we healthcare professionals don't integrate scientifically, taking Indian healing systems like yoga ,ayurveda,siddha etc ,anyway patients have already started integrating. Need of the hour ,is evidence based integration wherever required with a patient centered approach while respecting and maintaining each healing systems integrity.

YOGA, AYURVEDA AND PUBLIC HEALTH

Title: From Individual Practice to Population Health: Building the Foundations for Yoga as a Public Health Intervention

Dr. Rahul Shidhaye –
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Sarve Bhavantu Sukhinah—may all beings be happy and healthy—represents a vision of well-being extending beyond individuals to communities, societies, and all living beings. Indian Knowledge Systems, particularly Yoga and Ayurveda, have an important role to play in realizing this vision. However, translating this philosophy into meaningful population-level health outcomes requires systematic research, supportive policies, and sustained political commitment. Yoga has the potential to become an integral component of public health through its integration into schools, workplaces, healthcare systems, and communities. While policy support is essential for population-wide implementation, researchers must generate the evidence and develop practical approaches that make such integration possible.

Our research focuses on four interconnected prerequisites for establishing Yoga as a credible, scalable public health intervention.
First, evidence: Building a rigorous scientific evidence base demonstrating the effectiveness of Yoga interventions for clearly defined health outcomes.

Second, acceptability and aspiration: Ensuring that Yoga is not merely acceptable and feasible but also aspirational, motivating individuals to voluntarily adopt and sustain the practice.

Third, effectiveness in practice: Understanding how Yoga can be delivered and practiced to achieve meaningful benefits, thereby strengthening individual experiences, community confidence, and ultimately demand for Yoga.

Fourth, resource efficiency: Developing interventions that require minimal financial, human, and infrastructural resources without compromising effectiveness, making widespread implementation feasible and sustainable.

Through three currently funded research grants, our small research group is addressing these interconnected challenges, contributing incremental but essential building blocks towards a larger public health vision.

Ultimately, transforming Yoga from an individual wellness practice into a population-

level preventive strategy requires convergence between scientific evidence, individual aspirations, implementation research, and enabling public policy. Such an approach can help translate the timeless ideals of Indian Knowledge Systems into measurable, equitable, and sustainable public health gains.

Beyond Institutional Boundaries: Social Capital and Scientific Innovation in an Integrated NCD Prevention and Management Programme

***Sanjay S. Phadke**, Neuropsychiatrist, Pune.*

Background: Non-communicable diseases (NCDs) require integrated approaches that extend beyond disease treatment to address adaptive health, functioning and participation across the lifespan. Developing such approaches requires sustained collaboration across disciplines, technologies, interventions and healthcare settings.

Programme overview: This long-term, investigator-led international programme, involving researchers and key opinion leaders, is distinctive in being driven primarily by social capital—friendship, mutual trust, shared purpose and intellectual commitment—rather than formal institutional arrangements. Five interconnected workstreams have guided its evolution: health assessment and management methodology–inspired by Yoga and Ayurveda, predictive technology, autonomic neuroscience-based yoga *process* research, clinical implementation, and capacity building for scale-up. Initially focused on secondary prevention in established NCDs, the programme has progressively broadened its scope towards primordial, primary and tertiary prevention.

Key outcomes: Major outputs include the *Human Adaptome – Health Assessment and Management Manual*, a structured framework for adaptive health assessment and management; patented telemetric heart rate variability (Tele-HRV) technology; and targeted yoga interventions. Clinical implementation has extended across medical colleges, hospitals, clinics and health camps. The programme has benefited from engagement with trusts including the Centre for Behavioural Medicine (CBM), SPHERE and Yoga Forum Munich, alongside support from SKN Medical College, Pune, NIMHANS, Bengaluru, and Munich Open University (MVHS). Capacity building, in collaboration with national professional associations—including the Indian Psychiatric Society (IPS), Indian Association for Private Psychiatry (IAPP), Endocrine Society of India (ESI) and Research Society for the Study of Diabetes in India (RSSDI)—has included conferences, workshops, fellowships and training courses for medical professionals, allied health professionals and yoga teachers in

India and abroad.

Conclusion: This programme illustrates how relationship-centred collaboration can sustain scientific innovation and translate it into assessment tools, predictive technology, targeted interventions and clinical practice. It offers a model for connecting social capital with interdisciplinary research, clinical implementation and professional capacity building towards integrated NCD prevention and management across the lifecycle.

INTEGRATIVE CLINICAL SERVICES : CURRENT TRENDS AND CHALLENGES

Integrative Medicine Clinical Research at NIMHANS: Yoga as Evidence-Based Mental Health Care

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The Department of Integrative Medicine at NIMHANS has built a systematic clinical research programme that takes yoga from traditional practice to evidence-based therapy for psychiatric and neurological disorders. The work follows a translational pipeline: development and validation of disorder-specific yoga modules, feasibility testing, randomized controlled trials with active comparators, and mechanistic studies.

Completed and ongoing RCTs span trials in the area of schizophrenia, depression, addiction psychiatry (yoga for opioid withdrawal, published in JAMA Psychiatry 2026; the Y-BLISS yoga-breath trial for smoking cessation), anxiety and mood disorders (tele-yoga as an add-on in generalized anxiety disorder; yoga for antenatal depression in rural settings), and neurology (yoga in Hirayama disease). Tele-yoga delivery, validated during the pandemic and confirmed through five-year follow-up data, addresses barriers of distance, cost and stigma.

Mechanistic studies integrate heart rate variability, galvanic skin response, salivary cortisol, functional near infrared spectroscopy, fMRI and MEGA-PRESS GABA magnetic resonance spectroscopy to map autonomic, neuroendocrine and cortical pathways of yoga. The recent GAD tele-yoga RCT demonstrated large clinical effects with cortisol and prefrontal complexity changes, linking efficacy to mechanism. In parallel, the department has developed Indic-construct psychometric instruments, including the Prakriti Inventory, Yama Scale, Klesha Scale, Path of Yoga Scale, and the Yoga Performance Assessment, enabling dose-response and construct-level research grounded in Indian psychology.

Community scaling through the YES and NAMAN projects, and capacity building through structured courses for AYUSH professionals, complete the bench-to-community arc. Together, this body of work positions yoga as a scalable, culturally syntonic, mechanism-informed adjunct in psychiatry and neurology.

INTEGRATIVE CLINICAL RESEARCH IN NEUROLOGY

Yoga, Ayurveda, and Virtual Reality–Assisted Mindfulness in Integrative Neurology: Evidence and Emerging Perspectives

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Neurological disorders pose significant challenges to healthcare owing to their complex motor, cognitive, psychological, and functional manifestations. Despite advances in conventional neurological management, persistent symptoms and rehabilitation needs highlight the importance of comprehensive, patient-centred approaches. Integrative neurology offers an evolving framework that brings together evidence-based medical care, traditional mind–body practices, and emerging technologies.

Yoga, encompassing physical postures, regulated breathing, meditation, and relaxation, has demonstrated promising benefits in neurological rehabilitation. Using multiple sclerosis (MS) as a clinical example, randomized controlled trials and systematic reviews suggest improvements in fatigue, psychological well-being, and selected functional outcomes. Potential mechanisms include autonomic regulation, stress-response modulation, sensorimotor integration, and neuroplasticity-related processes, although direct mechanistic evidence remains limited.

Ayurveda offers an individualized therapeutic framework incorporating *Shodhana* (traditional purification or detoxification), *Rasayana* (rejuvenation), and selected *Panchakarma* procedures, including *Nasya* and *Basti*. These approaches may provide opportunities to explore traditional concepts of systemic regulation, functional restoration, and neurological well-being. Their potential relevance to neuroinflammation, neuroprotection, and neurorehabilitation remains largely hypothetical, warranting systematic investigation of underlying mechanisms, clinical effectiveness, and safety.

Virtual reality (VR)–assisted mindfulness represents an emerging approach to neurorehabilitation, potentially facilitating immersive relaxation, attentional engagement, emotional regulation, and therapeutic adherence. Although VR-based rehabilitation has demonstrated encouraging outcomes in neurological populations, the specific effectiveness of VR-assisted mindfulness requires further clinical validation.

Together, these approaches offer promising opportunities for personalized, multidisciplinary neurological rehabilitation,

highlighting the potential of integrating traditional practices with contemporary neuroscience and emerging technologies.

Keywords: Integrative Neurology; Yoga; Ayurveda; Panchakarma; Rasayana; Virtual Reality; Mindfulness; Multiple Sclerosis; Neurorehabilitation.

Integrative Approaches to Stroke and Neurorehabilitation

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Ayurveda and Yoga have much to potentially offer in the management of stroke and in rehabilitation after neurological events such as stroke and TBI. However, their roles in an integrative context have not been explored much. This talk will present our clinical experience of providing integrative care for these conditions at Svatantra Integrative Neurorehab, Bengaluru. It will also touch upon studies currently under way. This will be set against the backdrop of the current literature on integrative care in these conditions.

INTEGRATIVE INITIATIVES IN CCRAS

Topic: CCRAS initiatives in Integrative Medicine w.s.r to NIMHANS.

Dr Srinibash Sahoo, *Assistant Director, Regional Ayurveda Research institute, Trivandrum*

The Central Council for Research in Ayurvedic Sciences (CCRAS), an autonomous body under the Ministry of AYUSH, Government of India, is the apex organization responsible for promoting and coordinating scientific research in Ayurveda. Its evolution began with the establishment of the Central Council for Ayurvedic Research as an advisory body in 1962, followed by the formation of the Central Council for Research in Indian Medicine and Homoeopathy (CCRIM&H) in 1969. Subsequently, the Central Council for Research in Ayurveda and Siddha was established on 30 March 1978 and renamed CCRAS on 11 April 2011. The Council undertakes research in clinical medicine, pharmacology, medicinal plants, Ayurvedic literature, drug standardization, and quality control to establish scientific evidence for Ayurvedic interventions.

The historical association between CCRAS and the National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, dates back to November 1959, when an Ayurvedic Research Unit was established on the campus of the then All India Institute of Mental Health and Neurosciences (presently NIMHANS) to provide Ayurvedic treatment for psychiatric and neurological disorders. The Unit was taken over by CCRIM&H (presently CCRAS) in July 1971 while continuing under the administrative and technical guidance of NIMHANS. Subsequently renamed the Advanced Centre for Ayurveda in Mental Health and Neurosciences (ACAMH&NS) and was relocated to Goa in October 2019. The longstanding legacy of collaboration (more than five and half decades) between CCRAS and NIMHANS represents a significant initiative towards integrating Ayurveda with contemporary clinical research, particularly in neurological and psychiatric disorders. Several collaborative projects addressing intellectual disability, attention-deficit/hyperactivity disorder (ADHD), migraine, and alcohol dependence (Madatyaya) have been completed in collaboration with CCRAS and NIMHANS. Research on Parkinson's disease is ongoing, while a project on mild neurocognitive disorder (MNCD) has been sanctioned and is awaiting initiation following receipt of the trial drugs. Proposals for clinical studies on insomnia, schizophrenia, and depression submitted by the Department of Integrative Medicine, NIMHANS, are under consideration. In addition, a dedicated Muscular Dystrophy Outpatient Department (OPD) was conducted on the fourth Saturday

of every month for approximately 18–20 years in collaboration with the Department of Neurology. Patients with various forms of muscular dystrophy received Ayurvedic management through outpatient consultations and inpatient care. Cross-referrals between the Departments of Neurology and Psychiatry at NIMHANS and ACAMHNS further facilitated interdisciplinary cooperation, continuity of care, and a comprehensive approach to patient management.

Beyond collaborative clinical research, CCRAS has established several programmes to strengthen research capacity among students, teachers, and practitioners. These include SPARK (Studentship Program for Ayurveda Research Knowledge), SMART (Scope for Mainstreaming Ayurveda Research among Teaching Professionals), AGNI (Ayurveda Gyan Naipunya Initiative), Postdoctoral Fellowships, and PhD Research Fellowships. These programmes aim to familiarize students with research methodology, encourage clinical research among teaching professionals, promote the documentation of evidence-based clinical practices, and support advanced research training under experienced mentors. Under the PhD Research Fellowship programme, five candidates have been sanctioned fellowships to pursue doctoral research under the guidance of eminent professors in various departments of NIMHANS.

In conclusion, the collaborative initiatives of CCRAS and NIMHANS illustrate the potential of interdisciplinary research in advancing the scientific evaluation of Ayurveda, particularly in neurological and psychiatric healthcare. Through collaborative clinical projects, specialized outpatient services, research fellowships, capacity-building programmes, and formulation development, CCRAS continues to promote evidence-based Ayurvedic practice while preserving the fundamental principles of Ayurveda. Such sustained institutional partnerships are important for generating scientific evidence, encouraging innovation, and strengthening the integration of Ayurveda into comprehensive healthcare.

From Clinical Experience to Evidence Generation: An Integrative Clinical Research Approach to Diabetes and Metabolic Disorders

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Diabetes mellitus, particularly type 2 diabetes mellitus (T2DM), is a rapidly increasing non-communicable metabolic disorder and a major public health challenge. Its multifactorial nature, involving metabolic, dietary, behavioural and lifestyle determinants,

highlights the need for comprehensive and patient-centred approaches to long-term care.The Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of Ayush, is committed to generating scientific evidence for Ayurveda through contemporary research methodologies and integration with modern technologies. The Central Ayurveda Research Institute (CARI), Bengaluru, has undertaken clinical and collaborative research in diabetes, prediabetes, obesity and related metabolic disorders, translating clinical observations into structured research questions.This presentation will highlight selected research experiences representing diverse models of evidence generation, including observational research on dietary risk factors, and different models of integrative evidence generation The presentation will further highlight the integration of Yoga with Ayurveda through the multicentric health-systems implementation study like “Feasibility of Integrating a Structured Yoga Regimen into Ayurveda Treatment” The importance of feasibility, adherence, safety, pharmacovigilance and implementation outcomes in integrative clinical research will be discussed. Overall, it aims at highlighting how diverse research methodologies can progressively strengthen the evidence base for safe, effective and patient-centred integrative healthcare.

Quality by Standards, Evidence by Research: The Missing Link in Integrative Medicine

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Integrative medicine increasingly seeks to bridge traditional systems of healthcare, including Ayurveda and Yoga, with contemporary scientific research and practice. The WHO Traditional Medicine Strategy 2025–2034 makes strengthening the evidence base and appropriate regulation its first two objectives. Research and standardization serve these objectives from two directions: research generates evidence on safety, efficacy and clinical relevance, while standardization defines and assesses quality, consistency and safety.

A 2026 scoping review (Wang et al., Frontiers in Pharmacology) identified 1,624 international standards and good practice guidelines in traditional, complementary and integrative medicine from 33 international organisations, with output increasing roughly tenfold between 2000–2005 and 2021–2025. It found that poor adherence to such standards commonly results in low-quality, biased research data, and that their use is concentrated in leading economies.

China's experience shows how standardization builds global presence. By holding the secretariat of ISO/TC 249, China has led the development of more than 120 international standards since 2009, while standardizing TCM terminology with WHO and developing TCM-specific clinical trial reporting guidelines. National expertise thus became the international benchmark for TCM.

India now has a comparable pathway, in which CCRAS research can become national and international standards. CCRAS provides the technical base: consensus-based SOPs for Panchakarma and other procedures, a standardized Prakriti assessment scale, quality standards for more than 160 extra-pharmacopoeial drugs, NABL-accredited laboratories and technical dossiers on botanicals such as Bacopa monnieri and Withania somnifera. Through the CCRAS–BIS collaboration, this work can be converted into Indian Standards, adding to more than 240 already developed by the BIS Ayush Department, and taken to the international level through ISO/TC 249/SC 2 on Ayurveda and Yoga, whose secretariat is held by BIS.

This pathway serves integrative medicine and global presence together. Standardized procedures, assessments and products give conventional medical institutions clearly defined interventions to test in integrative studies, including in mental health and neurological conditions, and make results comparable across centres. International standards built on this evidence give Ayurveda a shared technical language with regulators, clinicians and industry worldwide, supporting trade, collaboration and recognition.

Standards cannot by themselves establish clinical efficacy, and research alone cannot guarantee consistent quality. Developed together, while respecting the whole-system and personalised principles of Ayurveda, they provide a sound foundation for evidence-based integrative healthcare.

Keywords: Ayurveda; Yoga; standardization; integrative medicine; BIS; Traditional Medicine Strategy; quality assurance

INTEGRATIVE CLINICAL RESEARCH IN MENTAL HEALTH

Evidence-Based Management in Manasa Roga (Ayurveda Psychiatry)

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Background: Evidence-based medicine (EBM) integrates the best available scientific evidence, clinical expertise, and patient preferences to guide healthcare decisions. Integrating evidence-based approaches into Ayurveda psychiatry is essential to establish the efficacy, safety, and clinical relevance of Ayurvedic interventions for mental health disorders. Systematic clinical research, validated outcome measures, and appropriate research methodologies can strengthen the scientific credibility and wider acceptance of Ayurveda in contemporary mental healthcare.

Objective: To present the clinical research evidence supporting Ayurvedic interventions in the management of *Manasa Roga* (mental disorders), with particular emphasis on anxiety disorders, major depressive disorder, insomnia, mild neurocognitive disorder, and selected psychosomatic conditions.

Methods: This presentation provides a narrative overview of clinical studies and research publications undertaken in Ayurveda psychiatry and related fields. The evidence discussed includes randomized controlled trials, comparative clinical studies, whole-system Ayurveda research protocols, and psychometric validation studies. Interventions include Manasamitra Vatakam, Brahmi Vati, Saraswatarishta, Ashwagandharishta, Mamsyadi Kwatha, Mamsyadi Ghana capsules, Brahmi Ghrita, Shirodhara, and multicomponent Ayurveda treatment protocols. Outcomes were assessed using standardized clinical instruments, including the Hamilton Anxiety Rating Scale, Hamilton Depression Rating Scale, Generalized Anxiety Disorder-7, Pittsburgh Sleep Quality Index, Insomnia Severity Index, WHO Quality of Life-BREF, Clinical Global Impression scales, and cognitive assessment tools. Safety assessments included adverse-event monitoring and relevant laboratory investigations.

Results: The studies presented indicate that several Ayurvedic interventions demonstrated improvements in anxiety symptoms, depressive symptoms, sleep quality, cognitive and functional outcomes, and quality of life. Comparative clinical studies reported outcomes comparable to conventional

treatments in selected conditions, including generalized anxiety disorder, major depressive disorder, and insomnia. Whole-system Ayurveda protocols demonstrated promising findings in major depressive disorder and selected psychosomatic conditions. The Ayurveda-based Assessment scale for Anxiety demonstrated encouraging reliability and validity, supporting the development of condition-specific assessment tools. Some studies also reported favourable tolerability profiles; however, these findings require interpretation in the context of individual study designs, sample sizes, and follow-up periods.

Conclusion: Emerging clinical evidence suggests that Ayurveda may have a valuable role in integrative mental healthcare. Strengthening methodological rigour, conducting adequately powered multicentre randomized controlled trials, standardizing interventions, validating Ayurveda-specific outcome measures, and ensuring transparent safety reporting are essential for advancing evidence-based Ayurveda psychiatry. Integrating classical Ayurvedic principles with contemporary clinical research methods may facilitate the development of scientifically evaluated, patient-centred approaches to the management of *Manasa Roga*.

Keywords: Evidence-based medicine; Ayurveda psychiatry; Manasa Roga; anxiety disorders; major depressive disorder; insomnia; whole-system Ayurveda; clinical trials; psychometric validation.

The Add-on Effect of Tele-Yoga on Generalized Anxiety Disorder: A Randomized Controlled Trial on Efficacy and Mechanisms

Nishitha Jasti

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Background: Generalized Anxiety Disorder (GAD) is the most prevalent anxiety disorder, with a treatment gap exceeding 75 percent in India. Cost, distance, therapist shortage and stigma demand an accessible, culture-aligned add-on intervention. We evaluated the efficacy and mechanisms of an eight week tele-yoga programme in GAD.

Methods: A validated generic yoga module for GAD was tele-adapted through structured consensus of ten yoga therapy experts and tested in a single arm feasibility trial (n = 20), which met all a priori benchmarks for acceptability, feasibility, satisfaction, attendance, performance and safety. In an assessor blind randomized controlled trial (CTRI/2023/04/052025), 88 outpatients with DSM-5 GAD on stable standard care were randomized to tele-yoga (24 live group sessions over eight weeks) or time matched Mental Health Education. The primary outcome was GAD-7; secondary outcomes

included the Pittsburgh Sleep Quality Index and mechanistic measures during the Trier Social Stress Test: salivary cortisol, prefrontal activity on functional near infrared spectroscopy (fNIRS), heart rate variability and galvanic skin response.

Results: Tele-yoga produced significantly greater reductions in anxiety and greater improvement in sleep quality. Cortisol area under the curve showed a large interaction effect, indicating HPA axis downregulation. Nonlinear complexity of dorsolateral prefrontal activity (Higuchi Fractal Dimension, Multiscale Entropy) improved across multiple fNIRS channels with yoga. Yoga performance quality correlated with anxiety reduction, indicating a dose response relationship.

Conclusion: This first tele-yoga RCT in clinically diagnosed GAD demonstrates clinical efficacy with convergent neuroendocrine and prefrontal mechanisms.

Efficacy of Adjunctive Ayurvedic Treatment in Pediatric ADHD: A Randomized Controlled Trial

Dr. Sangeeta S

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Objective: Although pharmacological and behavioural interventions are effective for attention-deficit/hyperactivity disorder (ADHD), many children experience incomplete symptom resolution. This randomized controlled trial evaluated the efficacy and safety of a standardized Ayurvedic add-on intervention to treatment-as-usual (TAU) in pediatric ADHD.

Method: Eighty children aged 6 to 15 years meeting DSM-5 criteria for ADHD were recruited from a tertiary neuropsychiatric centre in South India and randomized 1:1 to TAU plus Ayurveda or TAU alone for six months. TAU comprised of clinician-directed pharmacotherapy and/or behavioural interventions. The Ayurvedic regimen included Ayush-manas Vati (containing Bacopa monnieri, Centella asiatica, Withania somnifera, and Celastrus paniculatus), Brahma Rasayana and Jyotishmati Taila. Primary outcomes were ADHD symptom changes on Conners Parent and Teacher Rating Scales; secondary outcomes included the Child Behaviour Checklist (CBCL). Group-by-time effects were examined using mixed-effects models within the intention-to-treat framework, adjusting for age and correcting for multiple comparisons.

Results: At six months, children receiving Ayurveda augmentation demonstrated significantly greater improvements in parent-rated Inattention ($\eta^2p=0.14$) and Hyperactivity/Impulsivity($\eta^2p=0.13$) compared with TAU alone. Teacher ratings corroborated these findings, showing

moderate-to-large effects for Inattention (η^2p=0.12) and Hyperactivity/Impulsivity (η^2p=0.11). The intervention was well tolerated, with no serious adverse events.

Conclusions: A standardized polyherbal Ayurvedic adjunct to conventional ADHD care produced clinically meaningful improvements in core symptoms and associated behavioural domains beyond TAU alone. Further research is warranted to replicate these results, clarify the underlying neurobiological mechanisms, and determine whether integrative approaches can improve long-term outcomes in pediatric ADHD

Key Words: Attention-deficit/hyperactivity disorder; randomized controlled trial; adjunctive treatment; Ayurveda; complementary and integrative medicine

YOGA & CONSCIOUSNESS

Could a deep integration of the IKS with modern science be a first step towards a radical change in our collective consciousness?

Matthijs Cornelissen, MD,

Effective approaches to Health and Well-being are not all that the Indian Knowledge Systems can contribute to modern science. India also developed effective methods for the rigorous study of consciousness and a technology of consciousness that enabled it to explore the highest ranges of the inner domain. As a result, bringing the two knowledge systems together is not easy. The Indian systems are — ontologically as well as epistemologically — wider than those of mainstream science and they lose too much of their value and internal coherence when we try to fit them within a small niche of science as we presently have it.

In this talk we'll turn the tables. We'll have a look at the latest developments in modern science from the perspective of the Indian knowledge systems and then see what both systems can learn from each other.

We'll end with what a full integration might mean in terms of Sri Aurobindo's vision of a still ongoing evolution of consciousness. Nature has taken millions of years to develop the genome and the nervous system. Could a deep integration of these two sophisticated knowledge systems be a first step in the direction of the next stage of this evolution?

BASIC SCIENCE RESEARCH IN AYURVEDA

The Elusive in Common Complex Disorder Puzzle- Could AyurOMICs Unlock the Secret?

Thelma B K

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Common complex traits are the bane in medicine in general and the disease burden is only worsening. Intrinsic multi-level heterogeneity seems one major hurdle for effective/personalized management to become a reality, notwithstanding large data sets, shift from common variant association to rare variant burden, powerful analytical tools including AI based etc. Study cohort stratification by Ayurveda guided deep phenotyping into predominant prakriti subgroups and carrying out multi-OMICs based dissection is one promising option. We explored this approach in rheumatoid arthritis, as a test case of common disorders. Novel and unique findings in prakriti subgroups- from i) exome sequencing with emphasis on rare variants; and ii) urine based untargeted a) metabolomics and b) proteomics, which may expand our current knowledge of RA genetics and biology, as well as validate the Ayurveda principles, will be presented.

How do Medhya-formulations work?

Understanding Neurobiology behind MedhyaRasayana

Dr Ashwini Godbole, *Professor, Dept. of NMR & MRI Facility, University of Trans-Disciplinary Health Sciences and Technology (TDU), Bengaluru*

Our group at TDU takes a TransDisciplinary approach, including Ayurveda and Biology, to understand how the Medhya formulations support maintenance of brain health and enhanced cognition, especially during ageing. The research includes the community-based clinical studies and experimental research involving 'small-organism models' for exploring mechanisms of action. It offers insights into use of Medhya formulations like Brahmi Ghrita and their potential role in Healthy Ageing and Cognitive Wellness.

I will present interesting findings from our research which indicates that not only age, but metabolism and psychological health are also important for factors influencing cognition in elderly. Further, in our research, we observe that the selected clinically relevant formulations from Ayurveda bring about systemic changes which corroborate to extended lifespan, health-span and nervous system health.

Translating Tradition: Mechanistic Evidence for Triphala in Metabolic Diseases

Supriya Bhalerao, *Senior Principal Scientist, Interactive Research School for Health Affairs (IRSHA), Bharati Vidyapeeth, Pune*

Triphala, a classical Ayurvedic polyherbal formulation, has traditionally been used in the management of conditions including Sthaulya (obesity) and Prameha (diabetes). Ayurvedic attributes such as *Ruksha, Lekhana, Deepana* and *Kleda-Meha-Vinashani* provide a traditional framework from which testable biomedical hypotheses can be generated. Over the past decade, our research programme has applied complementary cellular, animal, biochemical and molecular approaches to investigate the biological effects of Triphala in pathways relevant to metabolic health. This work aims to examine the experimental relevance of traditional concepts while avoiding direct one-to-one equivalence between Ayurvedic constructs and individual molecular endpoints.

To investigate mechanisms relevant to obesity, initial studies employed the 3T3-L1 preadipocyte model to assess adipocyte differentiation, intracellular lipid accumulation and the expression of genes associated with adipogenesis. The work was subsequently extended to a high-fat diet-induced rat model to examine a broader range of obesity-associated outcomes, including adiposity, lipid metabolism, glycaemic regulation, inflammatory responses, oxidative stress and related molecular changes. Additional investigations assessed appetite- and energy-balance-related mechanisms by profiling neurotransmitters and adipokines involved in hunger and satiety, alongside hepatic metabolic processes. Together, these approaches broadened the inquiry from cellular lipid storage to interconnected processes implicated in systemic metabolic regulation.

A parallel line of investigation addressed biological processes relevant to glucose homeostasis and the traditional use of Triphala in Prameha. Studies examined insulin responsiveness in insulin-resistant hepatocytes, myocytes and skeletal muscle cells, using glucose uptake and insulin-signalling pathways as key endpoints. The effects of Triphala on insulin secretion were also investigated in pancreatic β-cells subjected to lipotoxic and hyperglycaemic stress. In addition, enzyme-based experiments evaluated its potential effects on α-glucosidase and dipeptidyl peptidase-4 (DPP-4) activity. These studies were designed to explore distinct processes involved in glucose regulation rather than to infer clinical efficacy from isolated mechanistic observations.

Across this research programme, the Ayurvedic concepts of *Lekhana, Deepana and*

Rasayana have served as interpretive frameworks for formulating research questions related, respectively, to adipogenesis and lipid accumulation; digestive, appetite-related and metabolic processes; and antioxidant activity and cellular resilience. These conceptual associations are intended to guide investigation and interpretation, not to establish that traditional constructs are reducible to specific pathways or biomarkers. The findings from cellular and animal models therefore require interpretation within the scope and limitations of each experimental system.

Ongoing phytochemical characterisation, further mechanistic studies and clinical investigations are extending this work across experimental and human settings. Future systems-level analyses may help integrate observations across pathways and clarify how the formulation's biological effects relate to metabolic regulation. Overall, this Ayurveda-informed research programme seeks to develop a more rigorous, testable understanding of Triphala in metabolic health by connecting traditional knowledge with contemporary experimental methods, while maintaining appropriate distinctions between traditional concepts, mechanistic evidence and clinical outcomes.

DRUG DEVELOPMENT IN AYURVEDA

Neuropsychotropic Drugs from Samhita to Laboratory Via Clinical Practice

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Our group* has evaluated clinically prescribed traditional *Ghrita* (lipid)-based herbal formulations in animal models of cognition, behaviour, learning and memory. Selected studies were extended to clinical settings for children and adults separately. The studies reported effects comparable to standard allopathic drugs, with additional benefits such as improved digestion. However, palatability and dosage form contributed to selective non-adherence. Outcome assessment relied on rating scales such as HAM-D or HDRS, without other objective measures, so the findings remain preliminary.

Neuropsychology research increasingly incorporates artificial intelligence and machine learning, particularly for early diagnosis using clinical brain-mapping tools and wearables. At the University of Melbourne, the ongoing MiND (Markers in Neuropsychiatric Disorders) study investigates blood biomarkers to distinguish neurodegeneration from primary mental illness.

Adequately resourced prospective trials should explore the strengths of Ayurveda and yoga through personalised care. These trials should combine available *prakriti* assessment tools and a *vikriti* matrix with standardised, improved and palatable lipid-based herbal formulations tailored to each patient. They should also include a pre-tested yoga and meditation programme and general dietary ingredients suited to participants' cultural preferences. Brain-mapping tools and blood biomarkers should be used to measure changes in outcomes.

A comprehensive whole-system study in a large patient population with conditions such as neurodegeneration or vascular dementia would strengthen the evidence base. The proposed study would include 90–180 days of treatment, followed by 180–360 days of post-treatment observation.

(* Bharati Vidyapeeth Deemed to be University, College of Ayurved. Department of RSBK and Medical College Department of Pharmacology, Pune)

Evidence-Based Evaluation of Ayurvedic Formulations in Type 2 Diabetes: Clinical Outcomes and Molecular Insights from a Randomized Controlled Trial

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M Vaishnav, S. Raghav, P. Meloth, V. Subrahmanyam, SG Harshitha Ananyasindhu, P. Shivayogi, R. Ashok, SS Naik, N Jayaram, S Subbaraya, K. Muniraj, V Simha, Shubhashree MN, KS Nagabhushana, S Srikanta, T Maheswar, S Bhat, S Rajakumari, N Bhat.

Centre of Excellence in Ayurveda for Diabetes and Metabolic Disorders @ IISc (Ministry of Ayush, Government of India), Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science (IISc), Central Ayurveda Research Institute, Samatvam Diabetes Endocrinology and Medical Center, Samatvam: Science and Research for Human Welfare Trust, Bengaluru, India.

Background: Evidence-based evaluation of Ayurvedic formulations requires systematic clinical comparison, predefined outcomes and investigation of biological changes accompanying treatment. Type 2 diabetes provides an important setting in which to examine this approach, while recognizing that traditional formulations and contemporary medicines should be assessed using rigorous and comparable scientific standards.

Objective: To describe clinical glycaemic outcomes and exploratory albumin-proteoform findings from a randomized, active-comparator controlled study of selected Ayurvedic formulations in people with type 2 diabetes, undertaken through the Centre of Excellence for Diabetes and Metabolic Disorders at Samatvam: Science and Research for Human Welfare Trust and Indian Institute of Science, Bengaluru.

Methods: The presentation focuses on three treatment contexts. Group A included drug-naïve participants receiving monotherapy, with metformin compared with the multi-plant formulations Varadi and Mustadi. Group B included participants receiving background oral antidiabetic treatment, with add-on glimepiride compared with Varadi and Mustadi. Group D included participants receiving background treatment, with add-on glimepiride compared with the single-plant formulations Bilwa and Daruharidra. Clinical assessment included glycated haemoglobin (HbA1c), fasting plasma glucose and fructosamine. Analyses considered changes from baseline to each participant's peak-response visit and the frequency and magnitude of HbA1c response, using a reduction of at least 0.4 percentage points as the operational responder threshold. The biological component examined model-derived HOMA2 indices, high-sensitivity C-reactive protein and other metabolic measures. Mass-spectrometry-based analysis was developed to quantify 14 albumin proteoforms, including native, glycated, cysteinylated, dual-modified, oxidised and

truncated forms. Exploratory correlations related proteoform changes to HbA1c, HOMA2-IR, HOMA2-B, HOMA2-S and hs-CRP.

Results: HbA1c, fasting plasma glucose and fructosamine improved across Groups A, B and D. The strongest overall glycaemic response was observed with allopathic comparators, particularly metformin in drug-naïve Group A. In Group D, the single-plant formulations showed a pattern of relatively greater HbA1c improvement than the multi-plant formulations in Group B. Responder frequencies varied by group and treatment arm, while HbA1c improved significantly within responder subsets across the treatment arms. All the ayurvedic formulations used in this study demonstrated excellent safety, with no significant adverse effects. Albumin profiling showed increases in native and truncated albumin proteoforms, alongside decreases in total glycated albumin, total cysteinylated albumin and several cysteinylated plus glycated (dual-modified) proteoforms. Patterns were generally stronger and more consistent in Group D. HbA1c showed the broadest correlation pattern with albumin proteoforms: associations were positive for several glycated and dual-modified proteoforms and negative for native and truncated proteoforms. HOMA2-IR showed no significant correlations with the measured proteoforms. HOMA2-B (with pure glycated proteoforms only) and HOMA2-S (with cysteinylated proteoforms only) interestingly showed strikingly selective and opposite associations, with potential pathogenetic and therapeutic implications. hs-CRP correlations were comparatively minor and limited to few glycated proteoforms.

Conclusions: The findings demonstrate an evidence-based framework for evaluating Ayurvedic formulations through randomized active-comparator clinical research integrated with molecular profiling. In this study, conventional ("allopathy") comparators showed relatively greater glycaemic potency, particularly in drug-naïve participants, while the Ayurvedic formulations showed better promise in specific situations, including as add-on interventions in people already receiving treatment. Albumin proteoform patterns may provide complementary information about treatment-associated metabolic changes, but the correlations are exploratory and do not establish causality, validated biomarker performance or a specific mechanism. This large body of exploratory investigations and promising results support a translational research pathway linking clinical outcomes with detailed biochemical characterization. Larger, longer, randomized trials with prespecified analyses are needed to confirm clinical effects, clarify safety and mechanisms.

SVYASA INITIATIVES IN PUBLIC HEALTH

Traditional Basis of S-VYASA's Public Health Approach

Prof M Jayaraman
Dean, Division of Yoga Spirituality
SVYASA Deemed University

S-VYASA's public health approach rests on classical Indian accounts of disease that locate its origin in the mind. In the Nirvāṇa-prakaraṇa of the *Yogavāsiṣṭha*, Vasiṣṭha names two sources of human suffering, mental affliction (*ādhi*, आधि) and bodily disease (*vyādhi*, व्याधि): आधयो व्याधयश्चैव द्वयं दुःखस्य कारणम् (*ādhayo vyādhayaś caiva dvayaṃ duḥkhasya kāraṇam*; *Yogavāsiṣṭha* 6.81.12). *Vyādhi* is suffering of the body, whereas *ādhi* is constituted of latent impressions (*vāsanāmaya*), and both are rooted in ignorance (6.81.14). The text distinguishes ordinary disease (*sāmānya vyādhi*), arising from the conduct of daily life, from the essential disease (*sāra vyādhi*) of embodied existence, which yields only to self-knowledge (6.81.23–25); it also recognises diseases not born of the mind (*anādhija*), which respond to medicines, *mantra*-s and the procedures of medical science (6.81.27). For mind-born disease (*ādhija vyādhi*, आधिज व्याधि) it sets out a precise pathogenesis. When the mind is agitated the body follows; the *prāṇa*-s lose their balance, the *nāḍī*-s fall into disarray, and food becomes ill-digested, undigested or over-digested (*kujīrṇa*, *ajīrṇa*, *atijīrṇa*), so that disease takes root (6.81.30–37). The section concludes: एवमाधेर्भवेद्व्याधिस्तस्याभावाच्च नश्यति (*evam ādher bhaved vyādhis tasyābhāvāc ca naśyati*), "thus *vyādhi* arises from *ādhi* and perishes with its absence" (6.81.38). The remedy runs in the same direction: pure action and the service of the good purify the mind, the *prāṇa*-s then flow in due order, food is properly digested, and disease is destroyed (6.81.40–42). S-VYASA researchers have read this sequence as a classical counterpart to stress-induced physiological dysregulation, for instance of the brain–gut axis (Kavuri et al., 2015).

The integrative framework comes from the Brahmānandavallī of the *Taittirīya Upaniṣad* (2.1–2.5), which presents the human being as five interpenetrating sheaths (*pañcakośa*, पञ्चकोश): *annamaya* (अन्नमय), *prāṇamaya* (प्राणमय), *manomaya* (मनोमय), *vijñānamaya* (विज्ञानमय) and *ānandamaya* (आनन्दमय) (Gambhirananda, 1957). The Integrated Approach of Yoga Therapy (IAYT) developed at S-VYASA unites the two texts. It holds that the root of psychosomatic illness lies in the mind: excessive speed of emotional response and strong likes and dislikes at the *manomaya* level, together with conflicts of values at the *vijñānamaya* level, produce imbalances in the grosser *prāṇamaya* and *annamaya* sheaths (Villacres et al., 2014). Treatment is therefore

directed at every sheath rather than at a single organ, through *āsana*, *prāṇāyāma*, meditation, counselling and the four streams of Karma, Bhakti, Jñāna and Rāja Yoga (Kavuri et al., 2015; Villacres et al., 2014).

A further dimension is the translation of this textual model into population-level evidence. In the Niyantrita Madhumeha Bharata trial, a multicentre cluster-randomised study across 80 rural and urban clusters in India, a yoga-based lifestyle protocol significantly reduced progression from prediabetes to diabetes over three months compared with standard care, with an adjusted relative risk reduction of 63.81 per cent, and also accelerated regression to normoglycaemia (Raghuram et al., 2021). Because the *ādhi–vyādhi* model locates the origin of non-communicable disease in the mind and in lifestyle, the response it calls for is preventive and promotive rather than merely curative, low in cost, and deliverable within communities. This is the distinctive character of S-VYASA's public health approach: a classical aetiology drawn from the *śāstra*, made actionable at scale and tested by contemporary scientific method.

YANTRA 2026

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Oral presentations

OP-01: District-level variation in non-communicable disease risk factors and health-service access in Karnataka implications for targeted prevention

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Aims/Objectives: Karnataka is undergoing an epidemiological transition characterized by an increasing burden of non-communicable diseases (NCDs) and substantial geographic inequalities in health-service access. National Family Health Survey-5 (NFHS-5) provides district-level population health and biochemical data that can support evidence-based targeting of NCD prevention.

Aim and Objectives: To quantify district-level variation in major NCD risk factors and health-service access in Karnataka, examine their interrelationships, and identify geographic priorities for targeted prevention and strengthening of primary health-care systems.

Methods: A cross-sectional ecological analysis of Karnataka's 30 districts was undertaken using NFHS-5 (2019–21) district-level indicators. Key exposures included elevated blood pressure, elevated blood glucose, overweight/obesity, tobacco/alcohol-related risk, and selected socioeconomic determinants. Health-system indicators included health-insurance coverage and selected preventive/service-utilization measures. District-level variation was summarized using mean, standard deviation, range and coefficient of variation (CV). Pearson/Spearman correlation coefficients were estimated between NCD-risk and health-access indicators. Composite NCD-risk and health-access indices were standardized using z-scores, and districts were classified into priority groups. Where individual-level data permitted, multivariable logistic regression was proposed to estimate adjusted odds ratios (aORs) with 95% confidence intervals (CIs).

Results: Karnataka recorded elevated blood pressure among 25.0% of women and 26.9% of men aged ≥15 years, while high/very-high blood glucose or treatment for diabetes affected approximately 15.6% of women and 18.0% of men. District analyses demonstrate substantial heterogeneity: Bengaluru Urban showed the largest reported increase in diabetes (17%) and hypertension (18%) between NFHS rounds, whereas Raichur showed approximately 0.9% increases in both indicators. State-level health-insurance coverage was only 28.1% in NFHS-5, indicating an important health-system access gap.

Conclusion: Marked district-level variation in NCD risk and health-system access supports a geographically targeted prevention strategy. District-specific risk stratification, strengthened

population-based screening, primary-care capacity, referral continuity and equitable financial protection should be prioritized within Karnataka's NCD-control framework.

Keywords: Non-communicable diseases, District-level variation, Hypertension, Health-system access, Targeted prevention.

OP-02: Manasika bhavabased assessment of generative AI dependency and its association with academic self-efficacy among undergraduate Ayurveda students a pilot analytical cross-sectional study

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Background: Generative Artificial Intelligence (AI) is increasingly integrated into academic learning, yet excessive reliance may influence cognitive engagement, self-regulation and perceived academic competence. Ayurveda describes cognitive and behavioural functioning through constructs including Dhee, Dhriti, Smriti and Manasika Bhavas. Evidence integrating these frameworks with contemporary technology related behaviour remains limited. Aims: To develop and preliminarily validate a Manasika Bhava-based Generative Artificial Intelligence Dependency Questionnaire (MB-AIDQ), assess Generative AI dependency, and examine its association with academic self-efficacy among undergraduate Ayurveda students.

Methods: The study comprised two phases. Phase I involved questionnaire development through literature review, expert evaluation, face and content validation, pilot testing and reliability assessment. Phase II was an analytical cross-sectional study among 100 undergraduate BAMS students. Generative AI dependency was assessed using the 18-item MB-AIDQ across five domains, and academic self-efficacy using the Academic Self-Efficacy subscale of the Motivated Strategies for Learning Questionnaire. Correlation and multiple regression analyses were performed.

Results: The MB-AIDQ demonstrated satisfactory internal consistency (Cronbach's α=0.712–0.875) and preliminary construct validity (KMO=0.911). Academic self-efficacy showed significant negative correlations with attachment and reliance on AI (ρ=−0.513), emotional responses (ρ=−0.589), cognitive disturbances (ρ=−0.557), and motivation/study habits (ρ=−0.558), while self-control and regulation showed a positive correlation (ρ=0.314). Emotional responses independently predicted academic self-efficacy (β=−0.640, p=0.034).

Conclusion: The findings provide preliminary empirical evidence linking multidimensional Generative AI dependency with academic self-efficacy and demonstrate the potential of an

Ayurveda-informed framework for investigating emerging behavioural phenomena. Further multicentric and longitudinal validation is warranted.

OP-03: Integrated management of chronic small vessel ischemic white matter disease evidence from clinical research

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Aims/Objectives: To evaluate a phased, integrated Ayurveda-diet-yoga-allopathy protocol for stabilizing a prothrombotic state as a prerequisite to Snehana-based Rasayana, in a geriatric patient with MRI-confirmed chronic small vessel ischemic white matter disease.

Background: White matter hyperintensities on MRI reflect abnormal myelination from vascular and non-vascular causes. Chronic hypoxia disrupts the blood-brain barrier (BBB), permitting pro-inflammatory mediators into brain parenchyma and driving demyelination, glial loss, and venous collagen deposition — culminating in stroke, cognitive decline, depression, and poor post-stroke outcomes. Conventional management targets vascular risk factors but offers limited neuro-regenerative benefit. Since myelin is lipid-rich and BBB integrity depends on fluid-channel dynamics, Ayurvedic therapy centered on Ap Mahabhuta — particularly Snehana, to nourish the myelin sheath — alongside Medhya Rasayana and Yoga, offers a physiologically rational complement to standard care.

Methods: A 77-year-old male presented with cognitive impairment, dysarthria, confusion, weakness, BP fluctuation, hypersomnia, and constipation. Over 45 days, he received Gandharvahastadi Kashayam, Brihat Triphaladi Churnam, and Krimighna Gulika with Pathya-Apathya diet, daily walking, and Anulom-Vilom Pranayama, alongside allopathic therapy. D-dimer was serially monitored; Snehana with Chirabilvadi Ghritam was planned upon its normalization.

Results: Constipation, energy, and sleep normalized by day 21. BP stabilized and cognitive function improved over the course of treatment. D-dimer declined from 1037 to 834 ng/mL by day 33 and remained stable, prompting initiation of Ghrita-based Snehana.

Conclusion: A phased integrated protocol was associated with symptomatic improvement and biomarker stabilization sufficient to permit planned Snehana, suggesting feasibility of this staged approach. The breaking down of the pathophysiology of any presentation or disease must be viewed through the lens of Samprapti Vighatana for effective treatment planning. Complex biomarkers or investigation reports, when interpreted through the framework of Nidana

Panchaka, analysis of Gunas, and assessment of Dosha-Dhatu status, allow clinicians to arrive at a more rational and individualized treatment protocol.

OP-04: Development of a structured Ayurveda psychotherapy satvavajaya protocol for the management of generalized anxiety disorder

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Aims/Objectives: To develop a structured Ayurveda Psychotherapy (Satvavajaya) protocol for the management of Generalized Anxiety Disorder.

Methods: : A structured Satvavajaya Chikitsa protocol was developed following focused group discussion (FGD) and organized into four sequential therapeutic sessions over four weeks, with a follow-up assessment after one month. Each session was designed for approximately 60–90 minutes. The protocol incorporates patient and disease assessment, identification of anxiety-provoking factors (Nidana) and unsuitable sensory/mental influences (Ahita Artha), Ayurvedic psychoeducation, relaxation and meditation practices, Ashwasana, observation and regulation of thoughts, lifestyle modification, behavioural re-conditioning, Pratidwandva Chikitsa, Abhyasa–Vairagya, Achara Rasayana, and individualized spiritual support. Assessment includes, Sharira Prakriti, Manasa Prakriti, Ayurvedic clinical assessment, Hamilton Anxiety Rating Scale (HAM-A), and Ayurvedic Anxiety Assessment (AAA) Scale. Home practices include meditation, breathing practices, journaling, mindful walking, healthy daily routines, and review of anxiety triggers and responses. The developed protocol is proposed for content validation by practicing experts in Ayurveda and Psychology using a structured expert validation format assessing scientific validity, appropriateness of session sequence, clinical feasibility, clarity, and suitability for GAD, adequacy of outcome measures, safety, and overall applicability.

Results: The developed protocol consists of four progressive phases: initial assessment and therapeutic alliance with introduction of basic calming practices; development of mental stability and self-regulation; modification of anxiety-maintaining behaviours and lifestyle factors; and consolidation of long-term mental well-being through individualized mental health planning. Expert validation will be used to assess the

relevance, clarity, feasibility, and comprehensiveness of the proposed intervention components and to identify areas requiring modification

Conclusion: A structured, sequential, and individualized Satvavajaya protocol for GAD has been developed based on Ayurvedic principles and psychotherapeutic components identified through FGD. The protocol integrates assessment, mental regulation, behavioural modification, lifestyle regulation, and long-term mental well-being within an Ayurvedic framework. Expert content validation is proposed. The authors declare no potential conflicts of interest

OP-05: Therapist related helpful qualities and processes in sattva enhancement therapy

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Aims/Objectives: Sattva enhancement therapy is an Indian psychology-based psychotherapy developed from the thematic analysis of Yoga Vasishtha, Bhagavad Gita and Patanjali Yoga Sutra. It focuses on enhancing sattva guna in an individual client thereby reaching a state of well-being. Sattva enhancement therapy has been tested and found effective in patients with common mental disorders. The study aims at identifying, operationally defining and assessing the constructs that might be relevant in the Sattva enhancement therapy in relation to the therapist.

Methods: Thirty constructs were identified through a comprehensive reading of the Bhagavad Gita, Patanjali Yoga Sutra and concepts from Integral yoga by Sri Aurobindo. The characteristic of the constructs as mentioned in the texts were noted in order to develop operational definitions for the constructs and based on that qualitative assessment sheets for further evaluation was also developed. Five experts were approached for their feedback on the constructs identified, operational definitions and qualitative assessment sheets and these modifications were subsequently included in the Therapist related helpful qualities and processes sheet.

Results: As per the expert feedback, the most relevant constructs in relation to the therapist were Anasakti and Karmayoga. A few other constructs were also identified, with respect to internal and interpersonal aspects of the therapist and the therapeutic work in the context of an Indian psychology-based therapy.

Conclusion: The study throws light at the significance of identifying therapist related qualities and processes in the psychotherapy context.

OP-06: The humming brain- axis decoding the neurophysiological basis of bhramari pranayama

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Aims/Objectives: To examine basic-science evidence on the neurobiological effects of Bhrāmarī Prāṇāyāma (BP), focusing on cortical oscillations, functional connectivity, autonomic regulation and physiological effects of humming, and to explore their mechanistic relevance to mental health.

Methods: Experimental studies investigating BP and its characteristic humming component were reviewed, with emphasis on objective measures including electroencephalography (EEG), heart-rate variability (HRV), respiratory physiology and nasal nitric oxide. Findings were interpreted alongside the classical description of BP in the Haṭha Yoga Pradīpikā (2.68), which associates its practice with ānanda arising in citta.

Results: Neurophysiological studies demonstrate measurable cortical modulation following BP. Increased theta and alpha activity, together with enhanced gamma activity in temporal and parietal regions, has been reported in experienced practitioners. BP has also been associated with enhanced alpha-band functional connectivity, suggesting modulation of large-scale cortical networks. Acute HRV findings following brief BP practice indicate increased vagal-associated autonomic activity, supporting interaction between respiratory regulation and autonomic control. Importantly, humming itself produces a substantial increase in nasal nitric oxide compared with quiet nasal breathing, identifying a distinctive physiological component beyond respiration alone. These convergent findings indicate that BP engages interconnected cortical, autonomic and respiratory mechanisms.

Conclusion: Bhrāmarī represents a distinctive model for investigating the brain–autonomic–respiratory interface of yogic practices. Convergence of EEG, network, HRV and nitric-oxide findings provides a plausible mechanistic framework linking the classical concept of citta-related ānanda with contemporary neuroscience and warrants controlled investigation in stress-related and mental-health conditions.

OP-07: Khecarī Mudrā and the neuroscience of mental quieting a translational perspective on tongue brain autonomic interactions

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Aims/Objectives: To examine the basic-science plausibility of Khecarī Mudrā as a potential modulator of neurophysiological processes underlying attention, mental quieting, autonomic regulation, and altered states of consciousness, and to explore its relevance as a translational model linking classical yogic concepts with contemporary neuroscience.

Methods: A conceptual evidence synthesis was undertaken by integrating descriptions of Khecarī Mudrā in the Haṭha Yoga Pradīpikā with contemporary evidence on tongue–brain interactions, oropharyngeal sensorimotor pathways, cranial sensory inputs, brainstem-mediated autonomic regulation, attentional networks, and neural mechanisms associated with consciousness. The available literature was critically examined to identify plausible neurophysiological pathways and gaps in direct empirical evidence.

Results: The synthesis indicates several plausible mechanisms through which sustained lingual positioning, coupled with focused awareness, may influence oropharyngeal afferent signalling, sensorimotor integration, brainstem autonomic processes, and attentional regulation. These pathways provide a potential neurobiological framework for investigating the traditional associations of Khecarī Mudrā with mental quieting, enhanced awareness, and altered states of consciousness. Nevertheless, direct experimental evidence specifically examining Khecarī Mudrā remains limited. In particular, studies employing electroencephalography, autonomic measures, functional neuroimaging, and neuroendocrine markers are scarce, restricting definitive interpretation of its neurophysiological effects.

Conclusion: Khecarī Mudrā offers a distinctive translational model for investigating the interface between oral sensorimotor activity, autonomic regulation, attention, and consciousness. While current evidence supports mechanistic plausibility rather than definitive causal claims, the practice provides a promising framework for hypothesis-driven neuroscience research. Carefully controlled neurophysiological studies are warranted to determine whether its traditionally described effects correspond to measurable neural, autonomic, and experiential changes

OP-08: Effect of integrated Yoga therapy on migraine-related outcomes stress insomnia and mental well-being a randomized controlled trial

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Aims/Objectives:
Background: Migraine is a disabling neurological disorder associated with recurrent pain, functional disability, psychological stress, sleep disturbance, and reduced well-being. This study evaluated a standardized Integrated Yoga Therapy (IYT) module as an adjunct to conventional migraine management.

Methods: Methods: In this randomized controlled study, 200 completers were analysed, with 100 participants receiving a standardized 60-minute IYT module plus conventional medical management and 100 receiving conventional management alone. Outcomes included Visual Analogue Scale (VAS), headache frequency, Headache Impact Test-6 (HIT-6), Migraine Disability Assessment (MIDAS), Perceived Stress Scale (PSS), Insomnia Severity Index (ISI), and WHO-5 Well-Being Index. Data were analysed using IBM SPSS Statistics Version 29.

Results: Results: At post-intervention, the IYT group demonstrated significantly lower VAS (2.71±0.64 vs. 7.65±1.11), headache frequency (6.84±4.62 vs. 13.54±5.06), HIT-6 (52.93±7.08 vs. 61.04±5.53), MIDAS (18.92±7.84 vs. 26.59±6.49), PSS (23.41±6.14 vs. 27.61±5.75), and ISI (15.27±4.33 vs. 18.89±3.38), all $p<0.001$. WHO-5 scores increased from 14.87±1.99 to 20.47±2.04 in the IYT group versus 15.48±2.14 to 17.34±2.09 in controls. Improvement in WHO-5 was significantly greater with IYT (mean difference=3.74, 95% CI 3.13–4.35; $p<0.001$; Cohen's d=1.70).

Conclusion: Adjunctive IYT produced greater improvements in migraine burden, disability, perceived stress, insomnia, and mental well-being than conventional medical management alone.

OP-09: Autonomic neuroscience of Yoga concept and practice a decade of Indo-German collaborative research

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Aims/Objectives: The Indo-German Collaborative Research initiative centered around a fundamental question: \What is unique about Yoga?\" This process-oriented research aimed to explore various facets of the autonomic neuroscience of yoga-asana—specifically the state, training,and trait effects—while investigating fundamental supportive mind-body mechanisms such as `prayatna-shaithilya` (the reduction of unnecessary effort)."

Methods: Cross-sectional and longitudinal studies were undertaken involving experienced yoga practitioners, yoga beginners, and a cohort of yoga trainees tracked over their training period. Ambulatory polygraphy, including Heart Rate Variability (HRV) analysis, was employed to assess autonomic modulation, especially focusing on virabhadrasana. Exploratory sub-sample studies included the assessment of energy consumption, electromyography (EMG), electroencephalography (EEG), and the development of a novel, palpation-based method evaluating key extensor and flexor muscle contraction to verify practice accuracy. The basis for these studies were the findings of our yoga concepts research, among them the biomechanics of yoga.

Results: State-effect studies in experienced practitioners demonstrated that different yoga-asanas elicit differential autonomic modulation, ranging from vagal withdrawal to vagal augmentation. Longitudinal data showed that these expert modulation patterns develop gradually. This finding was buttressed by comparing yoga-asana and aerobic exercise in yoga beginners; beginners initially showed autonomic responses similar to standard physical exercise, proving that the \'experienced\' pattern emerges only through theory-based cumulative yoga practice (see our virabhadrasana research in process of publication). Furthermore, `prayatna-shaithilya` emerged as a key physiological mechanism driving this unique autonomic shift, as well as the psychological mechanism of effort reduction. Long-term practitioners also exhibited significantly higher trait HRV than both healthy non-practitioners and patient cohorts.

Conclusion: Together, these Indo-German studies highlight the unique autonomic signature of yoga-asana as a learned, complex, neuro-physiological ability. The findings offer valuable benchmarks for

optimizing health promotion and standardising future clinical research frameworks.

OP-10: Management of adjustment disorder with satwavajaya chikitsa- a case study

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Aims/Objectives: Adjustment Disorder is one among stress induced disorders which has the essential feature of development of clinically significant emotional or behavioural symptoms in response to an identifiable psychosocial stressor or stressors occurring within 3 months of the onset of the stressor. This is the case of an 18-year-old female who was diagnosed with adjustment disorder with depressed mood. The presenting complaints were disturbed sleep, tearfulness, feelings of hopelessness and suicidal ideation for one month. The symptoms appeared 2 weeks following the onset of a stressor. An attempt is made to explore the concepts of psychotherapy in Ayurveda and its practical applicability with its understanding through contemporary psychotherapies.

Methods: Satvavajaya chikitsa or ayurveda psychotherapy techniques along with Pranayama were used for the management of the case. Adjustment Disorder New Module (ADNM) questionnaire was used before therapy, after therapy and after 2 months of follow-up. It explains the role of Satvavajaya chikitsa in the management of Adjustment Disorder with depressed mood.

Results: The ADNM questionnaire score before therapy was 64, the recommended cut-off being 47.5 or greater, and after 4 sessions of therapy (30 days) the score came down to 30. After 60 days, the score was 20.

Conclusion: This case discusses the applicability of Satvavajaya chikitsa in Adjustment Disorder and the understanding of Satvavajaya chikitsa through a contemporary perspective. Through carefully analysing the various aspects of Satvavajaya chikitsa, an effective way to deliver ayurvedic psychotherapy can be formulated.

OP-11: An Indian psychological perspective on conflict resolution associations with triguna in clinical and community adults

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Aims/Objectives: The present study examines Triguna and conflict resolution styles in community-dwelling adults and adults diagnosed with common mental disorders. The two groups are compared and study examines whether the gunas are associated with self-reported conflict resolution style within each.

Methods: This cross-sectional study included 82 adults. 40 with common mental disorders and 42 community-dwelling adults. Triguna was assessed with the Short NIMHANS Triguna Scale (Nayana, 2021). Conflict resolution styles were assessed with the Kraybill Conflict Style Inventory (2005), which scores separately for calm (low-stress) and storm (heightened-stress) conflict conditions. Analyses used t-tests with Cohen\'s d and Pearson and Spearman correlations.

Results: The clinical group showed lower relative Sattva and higher relative Rajas and Tamas than the community group. Directing was the only conflict style that differed between groups and was higher in the clinical group under both calm and storm conditions. Within the clinical group, higher relative Rajas was consistently associated with greater Directing. It was also associated with lower Avoiding and Harmonising. Higher relative Tamas was associated with greater Avoiding. Under storm conditions higher relative Sattva was associated with lower Directing and greater Harmonising and Compromising. In the community group, Cooperating under storm conditions was associated with higher Sattva and lower Rajas.

Conclusion: Triguna was associated with conflict orientation. Higher Rajas related most consistently to a directive style in the clinical group, and Sattva to more relational responses under stress. These exploratory findings need replication but support the value of Indian personality frameworks.

OP-12: Beyond mood stabilization an integrative Ayurvedic and modern psychiatric approach to bipolar disorder

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Aims/Objectives: To describe the clinical course of a patient with Bipolar Disorder receiving continued psychiatric management alongside selected Ayurvedic and lifestyle-based interventions, with emphasis on Sattvavajaya and Pathya-ahara ya–Vihara.

Methods: A case-based observational approach was used. A male patient with a documented diagnosis of Bipolar Disorder and a history of recurrent palpitations, increased breathing, anxiety-related symptoms, and negative thinking was followed clinically. Established psychiatric treatment was continued with regular follow-up. Adjunctive Ayurvedic management included Brahmi Vati, Saraswatarishta, counselling, physical exercise, Pranayama, and selected Snehana/Panchakarma-related procedures including Basti. The case was interpreted within the broader Ayurvedic conceptual framework of Unmada, without equating Unmada with Bipolar Disorder.

Results: During serial follow-up, the clinical records documented progressive improvement in mood, reduction in psychological complaints, and improvement in overall functioning. Anxiety-related symptoms and negative thinking were also reported to improve. Occasional low energy and breathing-related difficulties persisted during follow-up.

Conclusion: This case describes the feasibility of integrating selected Ayurvedic supportive and lifestyle-based interventions with ongoing psychiatric care in Bipolar Disorder. The observed clinical improvement cannot be attributed to the Ayurvedic interventions alone because established psychiatric treatment was continued concurrently. Sattvavajaya and Pathya–Vihara may provide supportive strategies for behavioural regulation and long-term self-management. Controlled studies are required to evaluate the efficacy and safety of specific Ayurvedic interventions as adjuncts in Bipolar Disorder.

OP-13: From sahit to molecular plausibility computational evaluation of classical Ayurvedic drug indications

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Aims/Objectives: To develop a computational database linking classical Ayurvedic drugs and their Saṃhitā-indicated therapeutic uses with bioactive compounds, molecular targets and molecular docking data, and to assess the molecular plausibility of classical drug–indication relationships.

Methods: Approximately 4,010 Ayurvedic drugs documented from the Ayurvedic Saṃhitās and Traditional Knowledge Digital Library (TKDL) were systematically compiled into a structured computational database. The drugs were linked with their reported bioactive constituents and chemical information obtained from PubChem. These constituents were mapped to molecular ligands and relevant protein targets using available molecular databases and literature. Existing molecular docking analyses were incorporated, including ligand–protein interactions, docking poses and binding affinities. For a selected classical indication, drug-associated molecular targets can be compared with indication-relevant protein targets. The binding affinity of relevant drug-derived ligands toward these targets is then considered as a parameter for assessing the molecular plausibility of the corresponding therapeutic indication described in the Saṃhitās.

Results: A structured database comprising approximately 4,010 Ayurvedic drugs has been developed, enabling systematic retrieval of classical drug information, bioactive constituents, molecular targets and available docking data. The computational framework facilitates identification of drug-derived ligands showing relevant interactions with indication-associated protein targets. Higher predicted binding affinity in appropriate docking models may provide molecular support for the plausibility of therapeutic relationships described in classical Ayurvedic texts.

Conclusion: The developed platform provides a systematic computational approach for exploring the molecular plausibility of classical Ayurvedic drug indications. By connecting Saṃhitā knowledge → Ayurvedic drugs → bioactive compounds → molecular targets → docking interactions, the database can help bridge classical therapeutic descriptions with contemporary molecular understanding. The findings should be interpreted as computational support rather than definitive proof of clinical efficacy, and identified relationships can serve as hypotheses for subsequent experimental and clinical validation.

OP-14: Ayurveda phenotyping and treatment response in anxiety disorder

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Aims/Objectives: To examine Manasika Prakriti as a measurable phenotype in anxiety disorders and explore its potential role in predicting treatment response.

Methods: Existing literature on Prakriti, Manasika Prakriti, anxiety, and psychiatric populations was reviewed. Based on the identified evidence. Adults with diagnosed anxiety disorders would undergo baseline assessment of psychiatric diagnosis, Manasika and Sharira Prakriti, anxiety severity, depression, sleep, and relevant clinical variables. Standardized treatment would be followed by assessments at 4, 8, and 12 weeks. Proposed outcomes include change in anxiety severity, response, remission, sleep, quality of life, functioning, and adverse effects. Potential biological correlates include inflammatory markers, cortisol/HPA-axis function, heart-rate variability, BDNF, sleep measures, EEG, and functional neuroimaging.

Results: Available studies suggest associations between constitutional characteristics and anxiety-related psychological variables. Amin and Vyas (2016) reported prominent Vata Pradhana and Rajas Pradhana patterns among 101 patients with GAD/Chittodvega. Soni et al. (2021) found significant differences in stress, depression, and anxiety across Manas Prakriti groups in 450 healthy young females. A NIMHANS Integrative Medicine study by Bhargav et al. (2021) involving 112 psychiatric patients demonstrated feasibility of Prakriti assessment and correlation between AyuSoft and clinician assessment. However, current evidence is predominantly observational or cross-sectional, with limited longitudinal research and insufficient evidence for treatment-response prediction.

Conclusion: Manasika Prakriti is a promising parameter for Ayurveda phenotyping in anxiety disorders. Current evidence supports association but does not yet establish predictive validity for treatment response. Prospective, adequately powered, and externally validated studies integrating constitutional, clinical, and biological measures are needed to determine whether Prakriti can provide clinically useful predictive information and contribute to personalized mental healthcare.

OP-15: Experience of conducting the first reported N-of-1 trials in Ayurveda lessons from two individualized studies in patients with mild cognitive impairment

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Aims/Objectives: N-of-1 trials are increasingly used to evaluate individualized treatment effects and are particularly suited to chronic, slowly progressive disorders with substantial inter-individual variability. Despite its compatibility with personalized practice, this design has not been employed in Ayurveda so far. Mild cognitive impairment (MCI), a condition lacking any specific disease-modifying therapy, is a suitable candidate for this design. To share the lessons from the first reported Ayurvedic N-of-1 trials evaluating Kalyanaka Ghrita and Saraswatarishta in MCI.

Methods: Two prospective, open-label N-of-1 trials were conducted using randomly alternating intervention and no-intervention periods of two months each, one following a randomized sequence and the other a quasi-randomized design. Background standard care was maintained throughout. Formulation selection was individualized through a reproducible algorithm based on classical indications. Products were procured from the market, and HPTLC analysis was performed. Cognitive, affective, and functional outcomes were assessed using standard tools, including the Hindi Mental State Examination (HMSE), Clinical Dementia Rating (CDR) scale, Geriatric Depression Scale (GDS), and Instrumental Activities of Daily Living (IADL) scale. Serial laboratory investigations monitored safety. Bayesian modelling was used to estimate within-patient treatment effects.

Results: Both formulations were associated with improvements in cognitive performance, functional ability, and depressive symptoms, and were well tolerated. The methodology was successfully integrated with Ayurveda\'s individualized approach, and Bayesian modelling enabled probabilistic treatment-effect estimation.

Conclusion: N-of-1 trials provide a robust framework for individualized evidence generation in Ayurveda. Standardized series with pooled analyses can extend these findings to population-level inference, strengthening the evidence base. Future studies should incorporate raw material DNA fingerprinting and further product characterization (e.g., GC-MS) to strengthen quality assurance. The design is particularly applicable to other chronic disorders such as osteoarthritis, diabetes mellitus, and hypertension

OP-16: Exploring knowledge attitudes and practices toward integrative interventions among family caregivers of persons with severe mental disorders in rural Karnataka

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Aims/Objectives: To explore KAP toward integrative interventions among family caregivers of persons with SMDs in rural Karnataka to inform co-design of a yoga-based lifestyle intervention for caregiver well-being.

Methods: A qualitative exploratory study using Theory of Change (TOC) approach. Approximately 80 family caregivers (mean age 48 years; primarily female, married, educated up to secondary school, predominantly homemakers and farmers, below-poverty-line status) participated in engagement workshops. Discussions explored knowledge, attitude and practices regarding integrative well-being including yoga, diet and home remedies, using semi-structured open-ended questions. Data were analysed thematically.

Results: The family caregivers reported consumption of regional foods, including both vegetarian and non-vegetarian items and practiced traditional home remedies (jeera water, lukewarm water, soda water etc.) for gastric issues, sometimes alongside allopathic tablets. Ragi and other nutritious grains were part of regular diet. Regarding yoga and lifestyle practices, caregivers employed strategies including spiritual practices, physical activity, household engagement, and social interaction. Although caregivers recognized their distress and need for well-being practices, their KAP regarding structured yoga-based lifestyle interventions remained limited.

Conclusion: Findings highlight the need for a structured yoga-based lifestyle, culturally responsive interventions provide an important foundation for co-designing an integrative caregiver well-being intervention in rural Karnataka.

OP-17: Preliminary evaluation of a Bhagavad Gita based sattva enhancement program for young adults

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Aims/Objectives:
Background India is home to the world's most extensive youth demographic. While this can be promising for a nation's future, research has shed light on the poor mental health status among this cohort. The existing interventions for young adults majorly use Western constructs and approaches to enhance wellbeing which have limitations when it comes to applicability. There is a gap in literature investigating well-being interventions for youth that are rooted in the wisdom of the Indian tradition. Aims Given the cultural significance and popularity of Bhagavad Gita, the current study aims to evaluate an adapted Bhagavad Gita based Sattva Enhancement Program in groups of young adults (18 to 25 years).

Methods: A pre-post-follow-up quasi experimental design was used and samples were recruited using convenience sampling. Standardized tools were used to assess the outcomes. Descriptive statistics and Wilcoxon's signed rank test were used to analyse the data.

Results: The pilot testing of the intervention was carried out in two groups (N1=9, N2=10 with mean age M1=20.6 years, M2=19.4 years). Limited efficacy testing of the intervention showed significant improvement in wellbeing ($p<0.05$), resilience ($p<0.05$), self-regulation ($p<0.01$) and reduction in Rajas ($p<0.05$), Tamas ($p<0.01$), depression ($p<0.05$) symptoms and smart-phone addiction ($p<0.05$). A non-significant but positive trend was noted in sattva and non-attachment. The results were corroborated with the feedback from participants at the end of the intervention.

Conclusion:
Informed by the feasibility analysis, the intervention can be modified and implemented on a larger sample for determining the effectiveness of this novel mental-health promotion program.

OP-18: Mitochondrial bioenergetics and redox regulation in Heartfulness meditation integrative mechanisms of a mindbody practice

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Dr. Kapil Thakur, Senior Scientific Officer
Dr. Mansee Thakur, HOD & Professor

Aims/Objectives: To investigate the association between long-term Heartfulness meditation practice and mitochondrial bioenergetics and oxidative stress by evaluating NAD^+, cytochrome c oxidase subunit 1 (COX1), and mitochondrial reactive oxygen species (mtROS), and to assess whether these molecular parameters are accompanied by differences in psychological well-being.

Methods: A cross-sectional observational study included 90 healthy adults aged 25–40 years: non-meditators (Control, n=30), 1-year practitioners (1YR, n=30), and ≥5-year practitioners (5YRS, n=30). Peripheral blood mononuclear cells were analyzed for NAD^+, COX1, and mtROS using colorimetric assay, ELISA, and flow cytometry, respectively. Psychological well-being was assessed using the WHO-5 Well-Being Index. Group differences were evaluated using one-way ANOVA with post-hoc analysis and ANCOVA to account for potential confounding factors

Results: The 5YRS group demonstrated higher NAD^+ levels (205.29 ± 7.47 vs. 167.69 ± 10.86 nM; $p<0.0001$) and COX1 levels (4.53 ± 2.60 vs. 2.58 ± 0.90 ng/mL; $p=0.0004$), with lower mtROS (19.13 ± 5.50% vs. 31.57 ± 6.69%; $p<0.0001$) compared with controls. Practitioners also demonstrated higher psychological well-being, suggesting a favorable relationship between long-term meditation practice and cellular as well as psychological outcomes.

Conclusion: Long-term Heartfulness meditation was associated with favorable mitochondrial bioenergetic and redox profiles. These findings provide molecular evidence supporting an integrative mind–body approach and highlight NAD^+, COX1, and mtROS as potential biological measures for investigating the cellular effects of meditation and understanding its relevance within integrative medicine.

OP-19: In silico investigation of Angelica glauca edgew choraka for Alzheimers disease a network pharmacology and molecular docking analysis

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Aims/Objectives: Alzheimer's disease (AD) is a multifactorial neurodegenerative disorder for which effective disease-modifying therapies remain limited. Smṛtihāni denotes impairment or loss of the capacity to recollect previously perceived, heard, or experienced knowledge, and may be conceptually discussed alongside Smṛtibhraṃśa/Smṛtināśa in the context of age-related cognitive decline. Angelica glauca Edgew. (Choraka), described as a Saṃjñāsthāpana dravya in Charaka Saṃhitā, warrants systematic investigation for its potential relevance to AD.

Objective: This study investigated the potential anti-AD mechanisms of A. glauca using network pharmacology and molecular docking.

Methods: Ninety-eight phytoconstituents of A. glauca were collected from IMPPAT, BiMP, and PubMed-indexed literature. Molecular-property assessment using SwissADME identified 40 compounds meeting drug-likeness, Lipinski's rule, blood–brain barrier permeability, and related pharmacokinetic criteria. Putative targets were predicted using SuperPred. Protein–protein interaction network construction and hub-gene analysis were performed using STRING and Cytoscape, while Gene Ontology enrichment was conducted using ShinyGO. HSD17B10, CTSD, STAT3, and CSNK2A1 emerged as hub targets; acetylcholinesterase (AChE) and NLRP3 were additionally included because of their established relevance to cholinergic dysfunction and neuroinflammation in AD. Angelicolide, archangelin, and oxypeucedanin were selected for molecular docking against the six targets using autodock vina.

Results: Archangelin demonstrated the most favourable docking affinity across several AD-relevant proteins, including AChE (−10.1 kcal/mol), NLRP3 (−10.5 kcal/mol), and CSNK2A1 (−9.7 kcal/mol). Oxypeucedanin also showed strong binding with AChE (−9.9 kcal/mol), NLRP3 (−8.5 kcal/mol), and CSNK2A1 (−8.2 kcal/mol). Angelicolide exhibited notable affinities for AChE (−8.9 kcal/mol), NLRP3 (−8.2 kcal/mol), and CSNK2A1 (−7.8 kcal/mol). The three compounds showed moderate binding toward HSD17B10, STAT3, and CTSD, with affinities ranging from −6.5 to −7.9 kcal/mol.

Conclusion: A. glauca contains drug-like, BBB-permeable phytoconstituents with predicted multi-target interactions relevant to cholinergic dysfunction, neuroinflammation, and AD-associated cellular pathways. Archangelin,

particularly, emerged as a promising candidate for further pharmacological, mechanistic, and experimental validation.

OP-20: Effects of progressive Sodhana pryma on quality of life and forgiveness a randomized controlled trial

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Indira Gandhi National Tribal University
Dr. Khushbu Jain, Assistant Professor
Dr. Jitendra Kumar Sharma, Professor

Aims/Objectives: To investigate effects of progressive Nāḍī Śodhana Prāṇāyāma (NSP) on Quality of Life and Forgiveness

Methods: 100 adults were randomized to experimental (n=50) and no-intervention control (n=50) groups. The experimental group practiced NSP for 13 weeks using a progressively intensified breathing-ratio protocol. WHOQOL-BREF and Heartland Forgiveness Scale (HFS) were assessed at Day 0, 45, and 90. Longitudinal Group × Time effects across the three assessment points were examined using mixed-effects models. Between-group differences in baseline-to-Day 90 were evaluated using Cohen\'s d.

Results: The experimental group showed progressive improvement across WHOQOL-BREF domains and HFS scores, with minimal change in control group. Significant Group × Time effects were observed for all WHOQOL-BREF domains and HFS dimensions. Largest between-group differences: HFS Total (Δ=8.28, d=2.23), Environmental QOL (Δ=10.87, d=2.19), Psychological QOL (Δ=11.41, d=1.90), Physical QOL (Δ=8.29, d=1.43), and Social QOL (Δ=9.99, d=1.27).

Conclusion: Progressive NSP was associated with substantial improvements across multiple quality-of-life domains and forgiveness over 13 weeks compared with control. These findings support the psychological benefits associated with progressive NSP and warrant further investigation of its broader psychophysiological effects.

OP-21: Development cultural adaptation and feasibility of a structured Yoga module for persons with severe mental disorders in rural community a three-phase study

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NIMHANS, Bengaluru

Aims/Objectives: To develop, culturally adapt, and assess the feasibility of a structured yoga module for community-based implementation among persons with SMDs.

Methods: A three-phase approach was undertaken. Phase 1 involved a 10-day pilot feasibility study among five persons with SMDs, assessing acceptability, attendance, practice performance, participant and therapist feedback, and the feasibility of assessment tools. Findings informed module modifications. Phase 2 comprised a Theory of Change workshop with 30 stakeholders to refine session content, activities, duration, frequency, and delivery strategies. Phase 3 involved community-based adaptation and implementation among 15 patients each in the rural communities of Thirthahalli and Turuvekere, assessing feasibility, acceptability, adherence, implementation experiences, and preliminary outcomes using quantitative and qualitative measures.

Results: Evidence synthesis and expert consultation informed an evidence-based module incorporating personalized practices, cognitive enhancement strategies, and chair-based adaptations. Pilot testing showed high acceptability and engagement, with exploratory improvements in functional disability and psychological well-being. Challenges in breath regulation, sequence recall, and chanting informed progressive modifications. The Theory of Change workshop emphasized local-language instruction, adherence strategies, safety protocols, volunteer training, and integration with primary healthcare. Community implementation demonstrated moderate-to-good yoga performance (overall YPA score: 61%), with stronger performance in externally guided practices than in breath-regulation components. The final module demonstrated acceptability, practicality, compatibility with primary healthcare delivery, and potential scalability.

Conclusion: A phased approach integrating feasibility testing, Theory of Change, and rural community adaptation supported the development of a feasible, acceptable, and implementation-ready yoga intervention for persons with SMDs.

OP-22: Prospective interventional case-control study on impact of meditation on MAOA gene expression in anxiety subjects

Aditi Kini, *MGM School Of Biomedical Sciences.*

Aim :To study the expression of Monoamine Oxidase A (MAOA) gene in response to mind-body intervention in patients with anxiety.

Objective: 1. To assess psychological well-being in patients with anxiety before and after Heartfulness Meditation using the DASS-21 (Depression Anxiety Stress Scale-21) questionnaire. 2. To examine the impact of meditation on Monoamine Oxidase A (MAOA) gene expression in patients with anxiety using RT-PCR.

Methods: A prospective interventional case–control study. Sixty eligible participants with anxiety were recruited from the Psychiatry OPD and randomly allocated into Case Study (n = 30) and Control Group (n = 30). The case group underwent 3 months of guided Heartfulness Meditation, while the control group received placebo sessions. Clinical Questionnaire DASS-21 and MAOA gene expression was analyzed using RT-PCR at baseline and post-intervention. Cycle threshold (Ct) values were obtained and analyzed using the ΔΔCT method to evaluate MAOA gene expression.

Results: The study group demonstrated a significant ($p<0.001$) reduction in DASS-21 anxiety scores following 3 months of Heartfulness Meditation compared with the control group. MAOA Gene expression analysis also revealed that the study group showed 1.19 folds downregulation post-intervention. These findings indicate that Heartfulness Meditation improved psychological well-being and modulated MAOA gene expression in individuals with anxiety.

Conclusion: Heartfulness Meditation significantly reduced anxiety and was associated with changes in MAOA gene expression. These findings suggest its potential as a safe, complementary approach for improving psychological well-being in individuals with anxiety.

OP-23: Validation of tailored Yoga and naturopathic hydrotherapy protocol for the management of polycystic ovary syndrome

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Ms. Shweta Mishra, Medical officer
Dr. Shweta Patel, Additional Professor
Ms. Tanusha Pathak, PhD scholar
Dr. Pranjal Shrivastava, Assistant Professor
Dr. Varun Malhotra, Additional Professor

Aims/Objectives: The purpose of this study was to professionally validate the perceived utility of a systematic yoga and naturopathy protocol in managing PCOS.

Methods: The study was conducted by the Department of Physiology at the All India Institute of Medical Sciences, Bhopal. The study involved 35 yoga and naturopathy experts. An extensive literature search was conducted in databases including PubMed, Scopus, and Google Scholar to develop the yoga and naturopathy protocol. The protocol included yoga asanas (postures), Sithilikaran vyayama (loosening exercises), pranayama (breathing exercises), Kunjal kriya (voluntarily induced vomiting), and kati-snan therapy (hip-bath therapy).

Results: The protocol was validated for content validity by participants using a 4-point Likert scale; a minimum content validity ratio of 0.31 was considered. The average content validity ratio of our entire protocol was 0.8, indicating its validity.

Conclusion: This is a validated protocol which can be incorporated into research studies with a larger sample size (comprising diverse age groups, socio-economic and geographical backgrounds, with varying metabolic and hormonal profiles) to assess its efficacy and utility.

OP-24: Global publication trends in the integration of Yoga and Ayurveda with modern medicine (2000-2026): A bibliometric analysis

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Dr. Umesh C, Assistant professor of Ayurveda,
Dr. Hemant Bhargav, Associate Professor of Yoga,
Department of Integrative Medicine, NIMHANS

Aims/Objectives: To map global publication trends and the collaborative and thematic structure of literature integrating yoga and ayurveda with modern medicine for mental health and neuroscience applications.

Methods: A structured Scopus search (January 2000–August 2026) combined yoga/ayurveda with medicine and neuropsychiatric terms, restricted to English-language peer-reviewed articles and reviews. Of 1,663 records identified, 1,371 met eligibility criteria after filtering by document type, language, and duplicates. Data were Analysed using R(Bibliometrix) and VOSviewer software to examine publication trends, country and author/journal productivity, and keyword co-occurrence/thematic mapping.

Results: The 1,371 included publications appeared across 669 journals from 81 countries, comprising 60.32% articles and 39.67% reviews. Research output more than doubled from 60 publications in 2020 to 122 in 2025 (annual growth rate: 14.21%). The United States (n=450, 32.8%), India (n=224, 16.3%), and Germany (n=62, 4.5%) were the leading countries. Cohen L (n=14), Kligler B (n=13), and Cramer H (n=12) were the most prolific authors, while Complementary Therapies in Medicine (n=28), Journal of Alternative and Complementary Medicine (n=24), and Journal of Ayurveda and Integrative Medicine (n=21) were the leading journals. Keyword co-occurrence identified 10 thematic clusters: Ayurveda-related pharmacological/neuroprotective terms (neuroprotection n=17, Alzheimer's disease n=55) formed a cluster distinct from yoga/mindfulness-based clinical terms (yoga n=183, mindfulness n=121), while integrative medicine", the most frequent keyword overall (n=191),clustered with oncology and palliative care rather than yoga or ayurveda."

Conclusion: Integrative yoga–ayurveda research in mental health and neuroscience is expanding rapidly. Future research should strengthen tri-domain, mechanism-based collaboration to advance integrative practice. Keywords: Integrative medicine, yoga, ayurveda, biomedicine, mental health, neuroscience, bibliometric analysis

OP-25: Ayurvedic and yogic interventions for anxiety disorders through purishvaha manovaha strotasa gutbrain axis a case study.

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Aims/Objectives:
Background Anxiety disorders are among the most widespread mental health conditions globally, often diminishing quality of life. Conventional management includes pharmacotherapy and counselling, yet many individuals seek complementary approaches that emphasize holistic well being. Ayurveda, together with Samupdeshana (counselling) and yoga, has been increasingly recognized for its role in supporting mental health through the gut–brain axis. Aims This case study aimed to evaluate the effectiveness of an integrative Ayurvedic and Yogic protocol—including Panchakarma, meditation, and Satvavajay Chikitsa—in reducing anxiety symptoms and improving overall well being in a patient presenting with stress, fear, and digestive disturbances.

Methods: Methods A 45 year old male patient with complaints of multiple bowel movements, bloating, mild abdominal pain, insomnia, fear of job loss, negative thoughts, and suicidal ideation was managed over 14 weeks. The therapeutic plan included Ayurvedic medication, Panchakarma procedures (Shirodhara and Basti), structured meditation, and a yoga regimen incorporating Pranayama techniques such as Kumbhak Kriya. Counselling sessions under Satvavajay Chikitsa were conducted to enhance relaxation and mental stability. Clinical focus was directed toward Purishvaha Strotasa and Manovaha Strotasa.

Results: Results Marked improvement was observed in confidence, clarity, and decision making. Hamilton’s Anxiety Rating Scale scores decreased significantly from 28 at baseline to 14 post intervention, accompanied by reduction in gastrointestinal complaints and improved sleep quality.

Conclusion This case study highlights the potential of integrative Ayurvedic and Yogic interventions in managing anxiety disorders through modulation of the gut–brain axis. Keywords — Kumbhaka, Manovaha Strotasa, Manas Roga, Purishvaha Strotasa, Satvavajay Chikitsa

OP-26: Anti-scorpion venom activity and identification of lead molecules in dashanga agada an insilico molecular docking study

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Aims/Objectives: To identify potential lead molecules from Dashanga Agada targeting scorpion venom-associated proteins through molecular docking.

Methods: Major phytochemicals were obtained from the PubChem database and docked against two venom-related protein targets, 1LQQ (cysteine-stabilized α/β toxin protein) and 1ZVG (tetrodotoxin-resistant sodium channel-related protein), using AutoDock Vina. Protein–ligand interactions were assessed using Discovery Studio Visualizer, while active-site validation was carried out using CASTp.

Results: Nineteen phytocompounds were docked against each selected target protein. Hayatine demonstrated the highest binding affinity toward 1LQQ, with a docking score of -170.73 kcal/mol, whereas Cyanidin-3-rutinoside showed the strongest affinity toward 1ZVG, with a docking score of -172.21 kcal/mol.

Conclusion: Cyanidin-3-rutinoside and Hayatine exhibited strong multi-target interactions with venom-associated proteins, indicating their potential as lead molecules for the development of plant-based anti-scorpion therapeutics.

OP-27: Deciphering the molecular pathways and gene targets of dashamoola in neurological disorders a computational approach

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Aims/Objectives: 1. Understanding the Molecular pathways of neurological disorders that are impacted by Dashamoola 2. Predicting the potential gene targets of Dashamoola which are related to neurological disorders. 3. Analyzing the disease-gene associations between Dashamoola and Cognitive disorders (ADHD & Autism).

Methods: 1. 84 bioactives were identified to be present among the plants in Dashamoola using IMPPAT database. 2. Out of the 84 bioactives, 51 bioactives were shortlisted for further study after ADME analysis using Lipinski formula. 3. 928 target genes were identified for these 51 bioactives using Swiss target Prediction and BindingDB database. 4. The genes involved in the pathogenesis of neurological disorders were obtained using Genecards and DisGeNET databases. 5. The genes from both the groups were cross matched against each other using Gene ontology and KEGG pathway enrichment

Results: The study revealed highly significant and positive correlation between the potential gene targets of Dashamoola and the following categories 1. Molecular functions – Neurotransmitter activity. 2. KEGG pathway enrichment – Neuroactive ligand signaling activity and Sertonergic synapse. 3. Wiki Pathway enrichment – Monoamine GPCR, ADHD & Autism ASD pathways. 4. Disease-gene associations enrichment – Cognitive and Substance related disorders

Conclusion: Computational analysis utilizing systems biology and network pharmacology has elucidated potential molecular mechanisms and gene targets of Dashamoola in neurological disorders. These findings provide a framework for experimental validation using targeted in vitro and in vivo models. Furthermore, these molecular insights offer a rational basis for designing rigorous clinical trials that bridge Ayurvedic principles with modern biomedical paradigms and thus advancing the path of integrative healthcare in India.

OP-28: Medhya rasayana and healthy cognitive ageing an evidence mapping review of Ayurvedic and modern neuroscience evidence with public health implications

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Aims/Objectives: Healthy cognitive ageing is an emerging public-health priority, while Ayurvedic Medhya Rasayana describes a preventive approach associated with intellect, memory and mental functions. This review aims to map Ayurvedic, preclinical and clinical evidence on Medhya Rasayana in relation to cognitive ageing, characterize the distribution of evidence across interventions, populations, study designs and outcomes, and identify gaps relevant to prevention and public-health translation.

Methods: An evidence mapping review was conducted using PubMed/MEDLINE, Scopus, Web of Science, Google Scholar, AYUSH Research Portal and DHARA. Evidence relating to herbs or formulations classically described as Medhya Rasayana, or explicitly identified as such in the literature, was considered. Studies were charted according to intervention/formulation, population, study design, outcome and evidence domain. Evidence was organized into Ayurvedic, preclinical neuroscience, clinical and public-health translation layers to identify concentrations, methodological variation and research gaps.

Results: The review identified evidence distributed across classical Ayurvedic literature, experimental neuroscience and human research, with greater representation of preclinical studies than preventive clinical research. Reported areas of

investigation included cognition and memory, neuroprotection, oxidative stress, neuroinflammation and neuroplasticity. Human evidence showed variation in interventions, formulations, populations, outcome measures and study duration. Important gaps included limited standardized formulations, relatively few rigorous studies in cognitively healthy or at-risk populations, limited long-term outcomes and incomplete translation of mechanistic findings into population-level prevention research.

Conclusion: The evidence map demonstrates a broad but heterogeneous research landscape for Medhya Rasayana and cognitive ageing. Future research should prioritize standardized interventions, robust preventive trials, long-term outcomes and interdisciplinary evaluation of feasibility and safety to support responsible integration of Ayurveda into evidence-informed healthy-ageing strategies.

OP-29: Lashuna rasayana following vaitarana basti in vatakaphaja gridhrasi a comparative study of clinical outcomes quality of life and inflammatory biomarkers

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Aims/Objectives: Gridhrasi (sciatica) is a frequently encountered condition characterized by radiating pain, stiffness, heaviness, and restricted movement, resulting in considerable functional disability and impaired quality of life. Vatakaphaja Gridhrasi presents with a distinct combination of Vata- and Kapha-dominant features and shares considerable clinical similarity with sciatica. Inflammatory biomarkers such as high-sensitivity C-reactive protein (hs-CRP) and erythrocyte sedimentation rate (ESR) was used as objective indicators of inflammatory activity and response to treatment was successful.

Methods: Fifty patients diagnosed with Vatakaphaja Gridhrasi were randomly allocated into two groups of 25 each. Both groups received Vaitarana Basti initially. Group A subsequently received Vatari Guggulu, while Group B received Lashuna Rasayana 6 capsules with milk before food for 30 days. Clinical assessment included Vatakaphaja Gridhrasi symptoms, Visual Analogue Scale (VAS), Straight Leg Raising (SLR) and Bowstring tests, Oswestry Disability Index, Roland-Morris Disability Questionnaire, and quality of life. Hs-CRP and ESR were assessed as inflammatory biomarkers.

Results: Lashuna Rasayana produced statistically significant improvement ($p<0.001$) in Vatakaphaja Gridhrasi features including Ruk, Stambha, Spandana, Ekanga Gouravata, Toda, Gruhnate, Tandra, Aruchi, and Sarvanga Gouravata. Significant improvement ($p<0.001$) was also

observed in VAS, SLR, Bowstring test, Oswestry Disability Index, Roland-Morris Disability Questionnaire, and quality of life. hs-CRP and ESR showed significant reduction ($p<0.001$). As it showed reduction in symptoms and also selected blood parameters reduced result in lashuna rasayana acting at cellular level in reverting the pathology.

Conclusion: Lashuna Rasayana following Vaitarana Basti demonstrated significant improvement in clinical manifestations, pain, functional disability, quality of life, and inflammatory biomarkers in Vatakaphaja Gridhrasi. The findings supported its therapeutic utility and indicated an additional benefit over Vatari Guggulu, particularly in reducing hs-CRP and ESR. Lashuna Rasayana effect on cellular levels as cell derived protiens and liver derived protiens were responsible for the changes in inflammatory action, so changes was seen on inflammatory molecules at cellular levels.

OP-30: Phase-specific Yoga modulates serum progesterone and mood disturbances in university females with premenstrual syndrome a randomized controlled trial

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Aims/Objectives: To evaluate the effects of a menstrual cycle-specific four-phase yoga module on serum progesterone levels and mood states among university students with premenstrual syndrome.

Methods: A prospective, two arm randomized controlled trial (RCT) was conducted among 46 female students aged 18–30 years with moderate to severe PMS, randomized equally into yoga group (YG) or waitlist control group (CG). YG received 40 supervised sessions over 8 weeks, tailored to menstrual, follicular, ovulatory, and luteal phases. Serum progesterone was assessed using early-morning blood samples, and mood via the Abbreviated Profiles of Mood States (A-POMS), during the luteal phase at baseline and post-intervention. Data were analyzed using ANCOVA using post-intervention data as the dependent variable and baseline data as covariates.

Results: Forty-one participants completed the study (dropout=10.87%). YG demonstrated a significant increase in serum progesterone levels compared to CG ($p<0.05$, $\eta^2p=0.14$). Significant improvements were observed across all A-POMS domains: Tension ($p<0.001$, $\eta^2p=0.36$), Anger ($p<0.001$, $\eta^2p=0.28$), Fatigue ($p<0.05$, $\eta^2p=0.14$), Depression ($p<0.01$, $\eta^2p=0.20$), Esteem Related Affects ($p<0.05$, $\eta^2p=0.13$), Vigour ($p<0.01$, $\eta^2p=0.21$), Confusion ($p<0.001$, $\eta^2p=0.40$) and Total Mood Disturbances ($p<0.001$, $\eta^2p=0.34$) in

the YG compared to the CG at 8-weeks.

Conclusion: A menstrual phase-specific yoga module significantly modulated serum progesterone and improved mood in university students with PMS, suggesting a promising non-pharmacological approach for PMS-related hormonal and affective disturbances.

OP-31: Vata mechano-transduction and psychophysiological regulation an inferential framework for understanding Yoga and pranayama.

Shamaa K, *Research Scholar, Indian institute of Science*

Aims/Objectives: Ayurveda describes Vāta as a functional principle governing movement, communication, sensory activity and dynamic regulation, with disturbances manifesting across psychological and physiological domains. Yoga and prāṇāyāma are traditionally used to regulate Vāta and restore equilibrium. Modern neuroscience provides several biological processes through which sensory, mechanical and respiratory inputs can influence neuronal signalling and psychophysiological state. However, the conceptual interface between these systems remains insufficiently articulated.To develop an inferential mechanistic framework connecting Vāta-related functions with neuronal conductivity, mechanotransduction, sensory ion channels and autonomic regulation, and to examine how yoga, prāṇāyāma and Emotional Freedom Techniques (EFT) may influence psychological and physiological regulation.

Methods: An integrative inferential synthesis was undertaken by mapping Ayurvedic descriptions of Vāta and psychosomatic regulation against established concepts in neuronal excitability, membrane mechanotransduction, Piezo and transient receptor potential channels, sensory signalling, autonomic regulation, stress physiology and mind–body interventions.

Results: The proposed framework suggests that movement, posture, touch, respiration and focused attention may provide convergent sensory and mechanical inputs capable of influencing mechanosensitive and sensory signalling, neuronal excitability and autonomic activity. These pathways may contribute to modulation of arousal, stress responsiveness, emotional processing and behavioural patterns, thereby providing a possible biological basis for coordinated changes in psychological and physiological temperament. The framework further proposes that the Vāta-regulatory effects attributed to yoga and prāṇāyāma may be understood through interacting sensory, neural and autonomic mechanisms rather than through a single biological pathway.

Conclusion: This inferential model does not equate Vāta with any single neural structure or molecular

mechanism. Instead, it proposes testable interfaces between an Ayurvedic functional construct and contemporary neuroscience. The framework may guide future experimental research investigating how yoga, prāṇāyāma and somatic practices produce integrated psychophysiological effects.

OP-32: Exploring the potential of pranic healing as a complementary approach- a series of seven case reports

Anjali Pal, *Faculty, AIIMS Raipur*

Aims/Objectives: To explore the application of Pranic Healing as an adjuvant to the Conventional Medical Treatment.

Methods: Pranic Healing was used as an adjuvant therapy on seven patients suffering from various disorders. Patients were advised not to alter, delay or discontinue their standard conventional medical therapy. Seven Patients who were suffering from different medical conditions were given sessions of Distant Pranic Healing after explaining the procedure and obtaining their consent. Their subjective feedback was taken after the Distant Pranic Healing sessions. A Certified Pranic Healer applied Specific Healing Protocols on each of the seven patients as per Grand Master Choa Kok Sui Practical Handbooks

Results: All the patients reported substantial improvement in their symptoms. -Patient of Tinnitus (suffering since one year , not responding to medical treatment) was totally relieved of her symptoms after Daily sessions of -Pranic healing for a month. -Patient of Primary Spasmodic Dysmenorrhoea was totally relieved of her symptoms after daily sessions of Pranic healing for 3 months. -Patient of burn injury (8 inches x 5 inches on the shin) got 90% relief in her pain and swelling after one a single session of Pranic healing - Patient of COVID 19 planned for hospitalization showed such improvement that she no longer needed to get admitted in the hospital - Patient who had not been able to concieve naturally for the past 1 year, concieved naturally after one month of starting treatment - Patient of Frozen Shoulder showed tremendous improvement in pain and mobility -Patient of hypothyroidism showed improvement in her symptoms and heart rate variability after therapy

Conclusion: Pranic healing was found to be potentailly effective adjunct to conventional therapy. Further research focussing on each of the ailments discussed is warranted to establish its efficacy and better understand its potential role as a complementary/ integrative therapeutic approach

OP-33: From agniama to gutbrain dysregulation an Ayurvedic framework for understanding neuroinflammation

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Aims/Objectives: To critically examine whether a rigorously defined Ayurvedic Agni–Ama phenotype can be investigated through measurable gut, metabolic, immune and neuroinflammatory domains without equating any individual biomarker with Agni or Ama. The review also aims to examine the conceptual relationship between the Ayurvedic disease-process framework of Agni, Dosha, Srotas and Ama and contemporary gut–brain neuroimmune biology.

Methods: An integrative narrative review was undertaken using PubMed/MEDLINE and targeted Ayurveda databases. Priority was given to systematic reviews, meta-analyses, mechanistic studies, psychometric studies and classical sources. Evidence was classified as classical, modern empirical, conceptual correspondence, hypothesis requiring testing, or unsupported.

Results: Classical literature describes Agni dysfunction, impaired transformation, Ama formation, Sama states, Srotodushṭi and disease progression through Samprapti. Contemporary evidence supports bidirectional gut–brain communication involving microbial ecology, metabolites, intestinal and brain barriers, immune signalling and CNS-resident immune cells. Microbiota-dependent regulation of microglia is supported by experimental studies, whereas human microbiome–neurological disease associations remain heterogeneous and predominantly associative. Clinical operationalization of Agni and Ama is emerging, but biological validation remains incomplete.

Conclusion: An evidence-graded Roga Nidana–Samprapti framework may provide a useful research architecture for investigating Ayurvedic phenotypes alongside gut–brain neuroimmune biology. Its value lies in generating falsifiable hypotheses rather than asserting that Ama is endotoxin, dysbiosis or inflammation.

OP-34: Cognitive function in type 2 diabetes a narrative review of Yoga and Ayurvedic evidence

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Dr. Sarita Vilas Ohol, Professor and Head

Aims/Objectives:
Background: Type 2 diabetes mellitus (T2DM) is associated not only with metabolic complications but also with alterations in cognitive function, cerebral haemodynamics, autonomic regulation and brain physiology. Cognitive impairment may arise through interacting mechanisms involving chronic hyperglycaemia, insulin resistance, oxidative stress, vascular dysfunction and altered neuronal metabolism. Yoga and Ayurveda offer potentially complementary approaches addressing the metabolic, psychological, autonomic and lifestyle-related determinants of diabetes-associated cognitive dysfunction.

Objective: This narrative review synthesizes evidence on Yoga and Ayurveda-based approaches for cognitive and cerebral health in individuals with T2DM.

Methods: PubMed, Ayush Research portal and DHARA was searched up to September 2026 for literature on T2DM, Yoga, Ayurveda and cognitive or brain-health outcomes. Of 58 articles screened, 37 were excluded for insufficient relevance, leaving 21 for narrative synthesis, comprising clinical studies, neurophysiological investigations and reviews.

Results: Randomized and pilot studies indicate that Yoga may improve working memory, executive function, cognitive processing and prefrontal cortical oxygenation in T2DM. Neurophysiological studies show changes in P300/N200 event-related potentials, alongside improved cerebral haemodynamics and autonomic function. Much of this evidence originates from a small number of research groups, with possible overlap between cohorts. Ayurveda-oriented literature offers a broader framework of individualized constitution, lifestyle regulation and medicinal plants with metabolic and neuroprotective effects, largely from preclinical studies; direct clinical evidence for Ayurvedic interventions on cognition in T2DM remains limited.

Conclusion: Yoga and Ayurveda-based approaches show promise for cognitive and cerebral health in T2DM, but current evidence is heterogeneous, with small and overlapping samples. Future studies should combine standardized cognitive testing with glycaemic, autonomic, cerebral haemodynamic and molecular outcomes.

OP-35: Multimodal Ayurveda approach of post-surgical facial palsy a case report of abhighataja Ardita

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Aims/Objectives: Aims: To evaluate clinical improvement following the multimodal ayurveda approach in Post- surgical Facial palsy, diagnosed as Abhighataja Ardita Objectives: 1. To document improvement in facial movements in a case of Post-surgical Facial Plasy 2. To assess the improvement through Sunnybrook Facial Grading System

Methods: A single case report A 28-year-old female presented with right- sided facial palsy following surgical correction of displaced right TMJ fracture. Clinical examination showed absence of wrinkles on right side of forehead, inability to lift right eyebrow, closure of right eyelid with effort and deviation of angle of mouth to left. The Sunnybrook Facial Grading System was adopted, whose composite score was calculated as 46. Ayurveda intervention was started 10 days following the surgery with oral medications, which continued for 60 days. Following which, Mukhabhyanga, ksheera dhuma, nasya were administered and continued for four months.

Results: Gradual improvement were observed over next 8-9 months. Improvement was noticed in facial symmetry, angle of mouth, eyelid closure. Improvement in eyebrow elevation remained poor. The improvement was documented in Sunnybrook Facial Grading System as the score was 88 by the end of observation period.

Conclusion: This case demonstrates the clinical course of post-surgical facial palsy and its management through a multimodal Ayurvedic approach interpreted within the framework of Abhighataja Ardita. The observed improvement in facial movements and blinking during the period of intervention provides a basis for further systematic evaluation of Ayurvedic approaches in peripheral facial nerve dysfunction.

OP-36: Herbdrug interactions of nootropic drugs in neuropsychiatric care implications for safe integrative practice

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All India Institute of Ayurveda, New Delhi

Aims: To synthesize pharmacokinetic, pharmacodynamic and clinical evidence on Herb Drug interactions involving nootropic herbs, emphasizing implications for neuropsychiatric pharmacotherapy and evidence gaps relevant to integrative practice. Objectives: Mandukaparni(Centella asiatica) Brahmi (Bacopa monnieri), Shankhpushpi (Convolvulus pluricaulis), Guduchi (Tinospora cordifolia) and Yashtimadhu (Glycyrrhiza glabra), are used in Ayurveda for cognitive, neurological and mental health indications. Their concurrent use with conventional drugs raises safety concerns in neuropsychiatric care as evidence on herb–drug interactions remains fragmented and are to be explored comprehensively.

Methods: A narrative review of peer-reviewed literature from PubMed, Scopus , Google Scholar and Ayurveda-focused databases till August 2026 was conducted. Evidence was appraised for CYP450-mediated interactions, transporter effects, pharmacokinetic and pharmacodynamic alterations, and documented clinical observations relevant to neurological and psychiatric medications.

Results: Shankhpushpi shows a notable interaction signal with phenytoin, underscoring the relevance of HDIs to antiepileptic therapy. Brahmi inhibited CYP2C19, CYP2C9, CYP1A2 and CYP3A4 in vitro, and an animal study reported increased amitriptyline exposure after co-administration, suggesting possible interactions with psychotropics. T. cordifolia and G. glabra,when used with medications metabolized via the CYP pathway, have been shown to increase the chance of herb-drug interactions. Preclinical studies indicate that hydroalcoholic extracts of C. asiatica can enhance the anti-seizure efficacy of conventional drugs like valproate and phenytoin.

Conclusion: Nootropic herbs as discussed may alter the pharmacokinetics or pharmacodynamics of co-administered drugs, particularly antiepileptic and psychotropic agents. Evidence strength varies, and most data derive from in vitro or animal studies with limited controlled human evidence. Structured HDI screening should be incorporated into integrative neuropsychiatric practice. Prospective human pharmacokinetic studies, standardized herbal preparations and systematic clinical surveillance are needed to establish clinical significance and support safer, evidence-based integration of Ayurveda with contemporary neuropsychiatric care.

OP-37: Operationalising Yoga therapy in tertiary neuropsychiatric care a six-month real-world report from a North Indian tertiary hospital

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Mr. Kartik Vij, Junior Research Fellow
Ms. Neha, Yoga Therapist

Aims/Objectives: Yoga therapy is increasingly offered alongside neuropsychiatric care in India, but how hospital-based services function within tertiary pathways, and whom they reach, is rarely documented. We describe the operation, utilisation, and case-mix of a yoga therapy service at a tertiary neuropsychiatric institution in North India over six months (April–September 2026). Objectives: To characterise referral patterns and case-mix, and test associations with sex and age.
Methods: Retrospective service evaluation of routine records from the institution\'s Yoga Therapy and Training Centre. Patients are referred at first presentation, as an adjunct during treatment, or in remission for self-management; consultation includes lifestyle counselling and a brief taught yoga module with home-practice reinforcement. Age, sex, and diagnosis were extracted from records; associations were tested with chi-square and Kruskal-Wallis tests.

Results: 1148 patients were seen (monthly range 137–238). Median age was 35 years (IQR 27–44; range 10–77); 71.1% were aged 18–44. 76.4% were female. Headache-spectrum disorders accounted for 72.2% of referrals (migraine 31.2%, unspecified headache 29.9%, tension-type headache 11.1%); epilepsy 6.0%; mood, anxiety, musculoskeletal, and other neurological presentations each accounted for about 3%; psychotic, personality, and other unspecified psychiatric disorders together accounted for 3.4%. Diagnosis category differed significantly by sex and age (both $p<0.0001$).

Conclusion: A yoga therapy service in this tertiary neuropsychiatric hospital drew sustained six-month utilisation, dominated by headache referrals from working-age women; psychiatric diagnoses were a small minority. Institutional footfall was not captured, so reach cannot be estimated. These findings provide a baseline for prospective work on referral pathways and implementation.

OP-38: Beyond lifestyle molecular pleiotropy of Vagbhatas vyyma in primary prevention of non communicable diseases NCDs

Samhitha Bhaskara, *The University of Trans-Disciplinary Health Sciences and Technology*

Aims/Objectives: Āyurveda describes vyāyāma within dinacaryā for systemic homeostasis and primary prevention. While modern public health guidelines typically prescribe standardized exercise volumes, the Aṣṭāṅga Hṛdaya conceptualizes vyāyāma as an individualized, pañcabhūta-based intervention yielding five pleiotropic outcomes: lāghavatā, karmasāmarthya, agnidīpti, medakṣaya, and vibhaktaghanagātratā. This review aimed to construct a translational framework mapping the five classical outcomes of vyāyāma onto contemporary molecular pathways driving the primary prevention of major non-communicable diseases (NCDs).

Methods: An epistemic translation was conducted by consulting the Aṣṭāṅga Hṛdaya Sūtrasthāna for classical definitions of vyāyāma in svāsthya rakṣaṇa, Biomedical literature (2016–2026) was retrieved via PubMed and Google Scholar focusing on molecular exercise physiology. Functional convergences were mapped contextually across the early pathophysiological drivers of cardiovascular disease (CVD), cancer, diabetes mellitus (DM), and chronic respiratory diseases (CRD).

Results: Classical endpoints mapped directly to tissue-specific molecular cascades. Lāghavata translated to enhanced endothelial nitric oxide synthase (eNOS) activity preventing atherogenesis in CVD, lowered baseline ventilatory demand in CRD, immune surveillance in oncology and browning of adipose tissue in DM. Karmasāmarthya operated macroscopically via vascular endothelial growth factor (VEGF) driven angiogenesis, and microscopically via peroxisome proliferator-activated receptor-gamma coactivator 1-alpha (PGC-1 α) induced mitochondrial biogenesis and autophagy, elevating systemic and cellular work capacity. Agnidīpti translated to optimised gut microbiome, resolved systemic inflammation and improved gastrointestinal migrating motor complexes. Medakṣaya reflected intrahepatic lipid clearance and cellular utilization of fatty acids. Finally, vibhaktaghanagātrata meant activation of key pathways establishing a structural amino acid reservoir that preserved muscle mass.

Conclusion: Both Āyurveda and modern biology demonstrated a convergent understanding of vyāyāma in maintaining homeostasis. However, while contemporary protocols rely on generalised exertion targets, Āyurveda provides a pragmatic, personalised metric by prescribing ardhaśakti vyāyāma adapted to seasonal variations. Ultimately, integrating this classical clinical precision with modern molecular science offers a superior preventive framework against the global NCD burden.

OP-39: Testing the elemental basis of Siddha taste classification a phytochemical and in silico ADMET analysis of 50 neuro-relevant plants

***Preyadarsheni* Krishnan**, *Research Scholar*
National institute of siddha

Aims/Objectives:
Background: Drug discovery for complex neurodegenerative disorders such as Alzheimer\'s disease has shifted toward network and polypharmacology based frameworks. This multi-target therapeutic logic is embedded in AYUSH systems. Siddha pharmacology classifies drugs through an elemental (panchabhootham) framework, wherein taste, potency, and post-digestive transformation reflect elemental composition. Following the principle that the microcosm mirrors the macrocosm, with elemental derangement underlying disease and formulatory correction. Whether this framework corresponds to measurable phytochemical or pharmacokinetic properties remains largely untested computationally.

Aim: To examine whether Panchabhootham-based taste classification of neuro-relevant Siddha plants corresponds to measurable phytochemical class and in silico ADMET properties.

Methods: Fifty plants indicated for neurological/cognitive conditions in classical Siddha texts were coded for taste, potency, and post-digestive taste. Elemental composition was independently coded by three raters against Materia Medica, with agreement assessed by Fleiss\' kappa. Compounds were compiled from phytochemical databases, screened for blood-brain-barrier permeability and drug-likeness, and classified by chemical pathway. Descriptors were compared across elemental groups using Kruskal-Wallis, chi-square, and permutation-based multivariate tests.

Results: Inter-rater agreement on elemental classification was significant (Fleiss\' kappa, $p<0.05$). Of 3,808 compounds retrieved from IMPPAT across 50 plants, 2,141 were duplicates, leaving 1,666 unique compounds for ADMET profiling. Elemental coding showed a predominance of tastes corresponding to counteract derangement of akasha (ether/space) and earth elements. Among compounds from space/earth-classified plants, 70% were predicted blood-brain-barrier permeant.

Conclusion: The predominance of taste-elements linked to space and earth derangement, alongside high predicted blood-brain-barrier permeability, offers a preliminary computational understanding of the elemental-based formulatory choices in Siddha neuropharmacology.

OP-40: Clinical utility of prana reset time a novel psychophysiological biomarker in mental disorders

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Dr. Hemant Bhargav, Associate Professor
Dr. Lakshmi Nishitha J, Scientist C
Dr. Sai Manoj P, Yoga Therapist

Aims/Objectives: To evaluate Prana Reset Time (PRT) as a tool to differentiate healthy individuals and patients with mental disorders, and to assess its test-retest reliability and association with disease severity.

Methods: This cross-sectional study included 115 participants: 55 healthy controls and 60 patients with Depression, Anxiety, OCD, and Schizophrenia (n=15 each). PRT defined as the time taken for nasal airflow to return to the baseline dominance pattern following a standardized forced alternate nostril exercise. Nasal dominance was assessed subjectively and objectively using acoustic rhinometry. PRT was measured in two blocks to assess test-retest reliability. Clinical measures included GHQ-12, HAMD, HAMA, Y-BOCS, BPRS, PSS, and CGI-S. Non-parametric tests, Spearman rank correlation, and intraclass correlation coefficient (ICC) were used for analysis.

Results: PRT differed significantly across the five groups ($H=46.799$, $df=4$, $p<0.0001$), with significantly higher PRT in Depression, OCD, and Schizophrenia than healthy controls; Anxiety did not differ significantly after Bonferroni correction. Test-retest reliability was excellent (ICC=0.873), with a slight practice effect. PRT correlated with PSS ($\rho=0.313$, $p=0.0003$), CGI-S ($\rho=0.320$, $p=0.005$), and chronicity of illness ($\rho=0.299$, $p=0.023$). In Anxiety, PRT correlated with HAMA ($\rho=0.545$, $p=0.036$). Participants with disturbed sleep had significantly higher PRT (120.39±43.97 vs 92.75±44.18 sec, $p=0.005$). Subjective-objective nasal dominance agreement was near-perfect (95.5%; $\kappa=0.908$).

Conclusion: PRT demonstrates reliability and significant associations with stress, clinical severity, chronicity of illness, and sleep disturbance. Its integration of a traditional yogic concept with objective physiological assessment supports its potential as a novel psychophysiological biomarker in integrative mental healthcare. Further longitudinal studies are required to explore the clinical utility of PRT and its changes with treatment over time.

OP-41: An experimental study on the effect of mandookaparni swarasa Centella asiatica in behavioral and neuromorphological aspects of spatial learning and memory

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Dr. J K Mukkadan, Research Director
Dr. Anandalakshmi KN, Professor
Nangelil Ayurveda Medical College Kothamangalam

Aims/Objectives: Hippocampal pyramidal neurons in the dorsal CA1–CA3 regions play an important role in spatial learning and memory. In Alzheimer's disease, these neurons undergo significant pathological changes. There were two objectives for the study 1. To evaluate the effect of mandookaparni swarasa (Centella asiatica) in spatial learning and memory 2. To evaluate the neuromorphological changes in dorsal hippocampal sub region (CA1-CA3) with mandookaparni (Centella asiatica)

Methods: The experiment was carried out in 24 adult male Wistar albino rats.The dosage of the medicine was fixed at 0.432 ml/200 gm rat and was administred in the form of swarasa(Juice). The animals were randomly divided into four groups of six each. Group 1 served as the healthy control, while Groups 2, 3 and 4 received Mandookaparni swarasa (Centella asiatica) for 10, 20 and 30 days, respectively. Spatial learning and memory were assessed using the T-maze behavioural model. Dendritic branching points and Dendritic intersections of hippocampal pyramidal neurons were evaluated using golgi cox stainining method and Sholls analysis with camera lucida up to 100 microns.

Results: There was a Significant decrease in no of trials in Acquisition test b/w 20 days and control ($p= 0.001$) , b/w 30 days and control ($p<0.001$).There was a Significant decrease in no of trials in Retention test b/w 20 days and control ($p=0.009$) , b/w 30 days and control ($p< 0.001$). There was a Significant increase in dendritic branching point in 0-20 microns b/w 30 days and control group ($p= 0.046$), Significant increase of dendritic intersection in 30 days group compared to control in 20 microns ($p= 0.046$), 40microns ($p < 0.001$), 60microns ($p = 0.001$), 100 microns ($p = 0.020$)

Conclusion: The study demonstrated that Mandookaparni swarasa (Centella asiatica) enhances spatial learning and memory in rats, potentially through increased dendritic growth and synaptic function in hippocampal pyramidal neurons.

OP-42: Integrative Ayurveda management of progressive supranuclear palsy mastishka majjagata kaphavrita vata a case report

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Dr. Vyshna Ravindran, Research Consultant

Aims/Objectives:
Background: Progressive supranuclear palsy (PSP) is a rare progressive neurodegenerative parkinsonian syndrome characterized by axial rigidity, vertical gaze palsy, early postural instability and bulbar dysfunction, with limited response to dopaminergic therapy. This case describes short-term outcomes following integrative Ayurveda management of PSP.

Objective: To document clinical and functional changes following a structured 21-day Ayurveda inpatient intervention administered alongside conventional therapy.

Methods: A 66-year-old man with a 7-year history of PSP, including difficulty rising, standing and walking without support, axial rigidity, bradykinesia, apraxia of eyelid opening and speech difficulty, was assessed clinically. Findings included vertical gaze palsy, applause and procerus signs, micrographia, dysdiadochokinesia and impaired dynamic standing balance. MRI showed small-vessel ischemic changes and age-related cerebral atrophy. He continued levodopa-carbidopa, rasagiline and pramipexole. The Ayurveda diagnosis was Mastishka Majjagata Kaphavrita Vata. Treatment included ama pachana, agni deepana, Vatahara, Brimhana and Majja-nadi balya approaches, with Nasya, Talam, Pinda sweda, Matra vasti, Kashaya vasti and Netradhara, alongside internal medicines

Results: PSP Rating Scale improved from 34 to 22, with gait improving from 12 to 6, limb motor from 3 to 1 and mentation from 4 to 2. WOMAC score improved from 32 to 19. The patient achieved unsupported sit-to-stand in one attempt and dynamic standing balance. Axial and cogwheel rigidity decreased, and eyelid-opening apraxia improved. No adverse events occurred.

Conclusion: In this case, integrative Ayurveda management was associated with improvement in motor function, gait and balance.

OP-43: Dissociative disorder a case report with Ayurveda perspectives on diagnosis and management

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Aims/Objectives: Aims: To describe the clinical presentation, assessment, and management of a case of dissociative disorder and to explore its interpretation through relevant Ayurveda concepts. Methods: A 12-year-old female diagnosed with dissociative disorder was assessed through a detailed psychiatric and Ayurveda clinical evaluation, including assessment of presenting symptoms, behavioural changes, psychological status, sleep pattern, emotional responses, and functional impairment. The patient was managed with a multimodal Ayurveda-based intervention comprising Shirodhara with medicated taila, Talam with Tagara churna, and Nasya with Panchagavya ghrita, along with selected oral Ayurveda medications. Supportive non-pharmacological interventions, including pranayama, relaxation techniques, Mandala art-based activities, and counselling of family members, were also incorporated. Clinical progress was monitored periodically throughout treatment based on changes in presenting symptoms, behaviour, emotional functioning, daily activities, and overall psychosocial functioning..

Results: Following the treatment, progressive improvement was observed in the dissociative manifestations, emotional and behavioural disturbances, and overall psychological functioning of the patient. At the beginning of the treatment, the patient was unable to communicate or discuss the underlying issues adequately, as dissociative episodes were frequently precipitated soon after the conversation began. With continued therapeutic intervention, gradual improvement in emotional regulation, behavioural responses, communication, and interaction was observed. The frequency and intensity of dissociative manifestations showed a noticeable reduction during the course of treatment. The patient gradually became more receptive to therapeutic communication and family support. The external therapies and internal medications were well tolerated throughout the treatment period, without any reported adverse effects.

Conclusion: This case highlights the potential role of Ayurveda therapeutic procedures and oral medications along with other procedures like pranayama, relaxation techniques and family counselling in managing dissociative manifestations, with Manas based concepts offering a complementary framework for understanding such presentations. Further systematic clinical studies are required to evaluate their applicability and therapeutic relevance.

OP-44: Prajnaparadha as a nidana of mental and psychosomatic disorders an Ayurvedic perspective

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Aims/Objectives: To explore the role of Prajnaparadha as a Nidana of mental and psychosomatic disorders and examine its preventive significance from an Ayurvedic perspective.

Methods: Relevant descriptions of Prajnaparadha were reviewed from major classical Ayurvedic texts, with emphasis on its definition, components of Dhi, Dhriti and Smriti, and its role in disease causation. The concepts of Manas–Sharira interaction, Karmaja Vyadhi, Nidana–Dosha–Dushya Samurchana and preventive principles were examined to understand the pathways through which cognitive and behavioural errors may influence health. The classical concepts were thematically analysed and conceptually correlated with contemporary perspectives on cognition, self-regulation, behaviour and stress, without equating Ayurvedic constructs directly with modern psychological or medical diagnosis.

Results: Prajnaparadha encompasses impaired discrimination, inadequate self-regulation and inappropriate choices in thought, speech and action despite awareness of appropriate conduct. Repeated errors in behavioural regulation, including disturbed sleep, improper dietary practices, substance use, emotional dysregulation and maladaptive responses to stress, may influence psychological and somatic health. Its relevance to Karmaja Vyadhi can be understood through the broader Ayurvedic principle that actions and their consequences may contribute to disease manifestation. However, the two concepts are not synonymous. Karmaja Vyadhi refers to disease arising in association with the consequences of Karma, whereas Prajnaparadha specifically denotes errors in intellectual discrimination, judgement and behavioural regulation. Thus, Prajnaparadha may be viewed as a potentially modifiable pathway through which inappropriate cognition and conduct contribute to disease. This framework also highlights the Manas–Sharira interrelation, wherein disturbances originating at the level of cognition and behaviour may influence physiological processes and manifest as psychosomatic illness.

Conclusion: Prajnaparadha provides a distinctive Ayurvedic framework linking cognition, behaviour and disease. Its recognition has preventive relevance by emphasizing appropriate judgement, self-regulation and conduct, thereby offering an Ayurvedic perspective for understanding and addressing mental and psychosomatic disorders.

OP-45: Ayurvedic management of tandava vata an hyperkinetic movement disorder a case study

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Background: Huntington's disease (HD) is a progressive, inherited neurodegenerative disorder characterised by involuntary choreiform movements, rigidity, postural instability, behavioural changes, and cognitive decline. From an Ayurvedic perspective, the clinical manifestations of Huntington's disease can be considered under the spectrum of Vata-vyadhi, particularly Tandava Vata, characterized by abnormal, excessive, and involuntary movements resulting from vitiation of Vata and impairment of neuromuscular functions. Ayurvedic management aims to mitigate aggravated Vata, improve functional integrity of the neuromuscular system, and promote strength and stability.

Methods: A 36-year-old female diagnosed with Huntington's disease presented with progressive involuntary movements of the limbs and trunk, gait disturbance, impaired coordination, muscle stiffness, and difficulty in performing routine activities. Ayurvedic assessment revealed features suggestive of aggravated Vata with predominant involvement of the Majja, Mamsa and Snayu, along with impairment of normal motor functions. Based on the clinical presentation, the condition was correlated with Tandava Vata. The patient was managed with a multimodal Ayurvedic intervention consisting of Shashtika Shali Pinda Sweda and Matrabasti, selected for their Vata-shamana, Brimhana, Balya and Snigdha properties. The interventions were administered according to the patient\'s tolerance and clinical status, with appropriate supportive dietary and lifestyle measures.

Results: Following the intervention, improvement was observed in the severity and frequency of involuntary movements, muscle stiffness, gait and functional activities. Clinical assessment using appropriate neurological and functional outcome measures demonstrated a favourable change from baseline. The intervention was well tolerated, with no significant adverse events reported during the treatment period.

Conclusion: This case highlights the potential role of an individualized Ayurvedic Vata-pacifying and Brimhana approach, particularly Shashtika Shali Pinda Sweda and Matrabasti, as supportive management in Huntington's disease. Although Ayurvedic interventions cannot be considered curative for the underlying genetic neurodegenerative process, they may have a role in improving functional symptoms and quality of life.

OP-46: From pathophysiology to therapeutics reinterpreting shushkakshipaka in the context of dry eye disease and meibomian gland dysfunction

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Aims/Objectives: To explore the pathophysiological relationship between Shushkakshipaka and contemporary DED and MGD, and to examine the therapeutic potential of Ayurvedic principles in the context of current challenges in dry-eye management.

Methods: A narrative-integrative review was undertaken using relevant Ayurvedic classical literature and contemporary peer-reviewed literature on DED, MGD, ocular-surface homeostasis, tear-film dysfunction etc. Ayurvedic concepts including Dosha-Dushya Siddhanta, Vata predominance, Rukshata, and relevant Samprapti components were conceptually mapped against established mechanisms of DED and MGD. Contemporary therapeutic approaches and their recognized clinical challenges were also reviewed to identify areas where Ayurvedic principles may provide hypotheses for long-term ocular-surface management.

Results: The review identified several areas of conceptual convergence between Shushkakshipaka and contemporary DED. Ayurvedic descriptions of ocular dryness and Vata-associated pathology may be interpreted in relation to disturbances of ocular-surface homeostasis, while the modern pathophysiology of DED demonstrates an interconnected cycle involving tear-film instability, hyperosmolarity, inflammation, epithelial disturbance, and meibomian gland dysfunction. Current management primarily focuses on restoring tear-film homeostasis, reducing inflammation, improving meibomian gland function, and controlling symptoms; however, the multifactorial and chronic nature of DED may necessitate prolonged and individualized management. Ayurvedic therapeutic principles directed toward Dosha-Samprapti, ocular-surface nourishment, local and systemic factors, and correction of contributory factors may provide a complementary framework for future investigation. However, existing Ayurvedic evidence remains heterogeneous, and definitive claims regarding superiority, permanent cure, or complication-free long-term efficacy cannot currently be established.

Conclusion: Reinterpreting Shushkakshipaka through the contemporary framework of DED and MGD provides a potentially useful bridge between Ayurvedic pathophysiology and ocular-surface science. Rather than establishing a one-to-one equivalence between the two disease constructs,

this approach may generate testable hypotheses regarding disease mechanisms and long-term therapeutic strategies. Well-designed clinical trials incorporating objective ocular-surface parameters, meibomian gland assessment, inflammatory and biochemical biomarkers, and long-term safety outcomes are required to determine the clinical relevance of this Ayurvedic framework.

OP-47: An Ayurveda and multidisciplinary model for high-grade spasticity in brain and spinal cord injury- case series

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Dr. Rakesh Nair, Senior Physician
Mr. Rajiv Vasudevan, CEO, Founder
Apollo Ayur Vaid

Aims/Objectives: The Core Issue in Post-brain and spinal cord injury spasticity acts as a major barrier to safe, efficient movement and functional recovery. Spasticity is velocity-dependent resistance to passive movement in affected muscle groups at rest. Clinically characterized by Involuntary muscle overactivity which alters limb positioning, pain, basic daily activities, gait, and mobility. Modest Functional Gains: conventional focal interventions effectively address local hypertonia and focal pain, functional gains in gait speed and independence remain modest and inconsistent.

Methods: To describe the clinical profile, functional impact, and outcome of an integrated multidisciplinary approach in the management of spasticity among patients with brain and spinal cord injuries undergoing neurorehabilitation.
Results: Case series 1: A case of TBI spasticity MAS4 at shoulder flexors, elbow flexors and MAS9 at wrist flexors Following 8-10weeks spasticity improved from MAS4 TO MAS 2, and MAS9 at wrist flexors improved to MAS3.

Case series 2: A case of Pontine bleed-Hemorrhagic CVA spasticity was graded as MAS3 at shoulder flexors, elbow flexors and wrist flexors. Following 10weeks spasticity improved to MAS 1+, and at wrist flexors improved to MAS2.

Case series 3: A case of Ischemic stroke spasticity was graded as MAS9 at shoulder flexors, elbow flexors and wrist flexors. Following 8-10weeks spasticity improved from MAS 4, and at wrist flexors improved to MAS4.

Case series 4: A case of TBI spasticity MAS9 at shoulder flexors, elbow flexors ,wrist flexors. Following 8-10weeks spasticity improved to MAS 3

Conclusion: By adding Ayurveda in Multidisciplinary Integration is to give the high chronic prevalence and the modest functional gains of isolated medical interventions, managing high-grade spasticity requires moving beyond

symptom-level suppression and Systemic Rehabilitation with ayurveda and multidisciplinary model—combining biomechanical correction, targeted therapies, and integrative whole-body protocols—is essential to break sensorimotor barriers, sustain functional independence, and improve quality of life.

OP-48: Revisiting medhya rasayana - exploring glial modulation and neuroinflammation

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Aims/Objectives: To explore the role of Medhya Rasayana beyond its neuronal effects, with particular focus on its potential influence on glial-mediated neuroinflammation

Methods: Available experimental and clinical evidence on the four classical Medhya Rasayana drugs and their major phytoconstituents was reviewed, with emphasis on glial responses, inflammatory processes, oxidative stress and neuroprotective mechanisms.

Results: The available evidence indicates that Medhya Rasayana drugs and their constituents may influence several biological processes associated with neuroinflammation, oxidative stress and neuronal homeostasis. Experimental findings also suggest possible interactions with glial-mediated responses.

Conclusion: Glial modulation represents a plausible neurobiological pathway through which Medhya Rasayana may contribute to brain health. Further standardized and mechanistic investigations are warranted to explore this Ayurveda–neuroscience interface.

OP-49: Ardhavabhedaka as a brain network disorder an integrative review

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Dr. Naveen B S, Professor, Department of PG studies in Shalakya tantra.
Sri Sri College of ayurvedic science and research.

Aims/Objectives: To review the current understanding of migraine as a brain network disorder and to correlate it with the classical description of Ardhavabhedaka in Ayurveda literature.

Methods: A review of published literature was conducted on the neurobiology of migraine, focusing on its network-level understanding and clinical phases. The PRISMA flow chart was referred to for the inclusion and exclusion criteria used in selecting studies. Classical Ayurveda texts were studied for the nidana, samprapti, lakshana, and chikitsa of Ardhavabhedaka. The two bodies of knowledge were compared to identify areas of correlation and difference, and the strengths and

limitations of the available evidence were appraised.

Results: Contemporary literature describes migraine as a condition involving altered communication across multiple brain regions and networks, rather than a single localised abnormality. This explains its cyclical nature, distinct phases, and wide range of associated symptoms. These features parallel the unilateral pain, periodicity, and accompanying symptoms of Ardhavabhedaka, as well as the involvement of Vata and Tridosha in its samprapti. The review also identified limitations, including heterogeneity across studies, differences in terminology, and a lack of direct clinical research correlating Ayurveda concepts with network-level findings.
Conclusion: Viewing migraine as a brain network disorder provides a coherent framework for interpreting Ardhavabhedaka in contemporary terms. Integrative research using standardised diagnostic criteria and objective outcome measures is needed to validate Ayurveda understanding and interventions.

OP-50: Conceptual exploration and clinical correlation of dhatupaka through contemporary biomarkers an integrative review

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Aims/Objectives: To evaluate the classical Ayurvedic concept of DHATUPAKA by correlating it to pathological states of Dhatu Dushti with relevant contemporary molecular, biochemical, and physiological biomarkers.
Methods: A comprehensive literature search was conducted across classical Ayurveda treatises alongside modern scientific databases (PubMed, Scopus, and AYUSH Research Portal). Classical Dhatupaka Lakshana were cross-analysed with relevant biological markers for integrative understanding.

Results: Distinct correlations emerged between individual Dhatupaka in reltion to Dhatu Dushti lakshana and clinical biomarkers. Rasa Dhatu Dushti corresponds to alterations in serum electrolytes, plasma proteins, and inflammatory markers (CRP, ESR). Rakta Dhatu Dushti aligns with complete blood counts and the other Dhatu Dushti emerged during the literature search.

Conclusion: Establishing an Objective Biomarker framework with DHATUPAKA enhances clinical precision in early disease detection, enables SADYASADYATA and provides Evidence-based outcomes for Ayurvedic therapies.

OP-51: Sleep disturbance as a clinical gateway to the recognition of mild depression among patients receiving treatment for physical conditions in an AYUSH hospital a 24-month clinical observational study

Manish Shah, *Punarnava Arogya ane shanshodhan kendra*

Aims/Objectives: Identify mild depression among patients admitted to an AYUSH hospital for physical health conditions. It also examined sleep disturbances and common physical complaints among patients identified with mild depression and explored whether sleep-related complaints could provide an opportunity for further psychological enquiry.

Methods: A 24-month clinical observational study was conducted among 326 inpatients receiving treatment for physical health conditions. Each patient was assessed through personal interaction using a structured symptom checklist (Appendix-1), covering physical, sleep-related, psychological, and stress-related complaints. Patients who reported relevant psychological concerns were referred for psychiatric consultation, and depression was clinically assessed by a psychiatrist. Sleep disturbance was recorded according to the time of night when the difficulty occurred. The findings were summarized using descriptive analysis.

Results: Of the 326 patients assessed, 96 (29.4%) were clinically identified as having mild depression. Twelve patients had a previous history of depression, while 84 were identified for the first time. Sleep disturbance was reported by 85 (88.5%) of the 96 patients. Among them, 71 (83.5%) experienced disturbance around midnight, 5 (5.9%) during the early part of the night, and 9 (10.6%) later in the night. Common complaints among patients with mild depression included insomnia (33.3%), gastrointestinal problems (30.2%), joint pain (22.9%), diabetes (7.3%), hypertension (6.3%), obesity (6.3%), and skin problems (1.0%). Some patients reported more than one complaint.

Conclusion: Mild depression may not always be recognized in patients who seek treatment primarily for physical health problems. Regular interaction with patients and simple symptom-based enquiry may help clinicians notice psychological concerns that may otherwise remain unspoken. Sleep disturbance was frequently reported among patients identified with mild depression and may therefore be a useful starting point for asking further questions about mood, stress, fatigue, coping, and related psychological concerns. However, sleep disturbance by itself should not be considered a diagnostic sign of depression

OP-52: Targeting the microbiotagutbrain axis in affective disorders an integrative translational model of agni grahani and deepana-pachana therapeutics

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Aims/Objectives: To delineate a translational framework linking Grahani Samprapti with gut–brain neurobiology and evaluate the therapeutic mechanisms of Deepana-Pachana interventions in mitigating central neuroinflammation and affective symptoms.

Methods: A systematic comparative synthesis was conducted mapping classical Ayurvedic pathophysiological constructs (Charaka Samhita Chikitsa Sthana 15) to contemporary neurobiological cascades, focusing on enterocyte tight-junction dynamics, kynurenine-pathway shunting, and short-chain fatty acid (SCFA) metabolism. Standardized outcome parameters were mapped to psychometric scales (HAM-A, PHQ-9) and biological markers (hs-CRP, diurnal cortisol, SCFAs).

Results: Ama functionally parallels macromolecular endotoxemia secondary to epithelial barrier breakdown. Systemic lipopolysaccharide translocation triggers pro-inflammatory cytokines (IL-1$\\beta$, IL-6, TNF-\\alpha), diverting tryptophan toward neurotoxic kynurenine metabolites. Bioactive carminatives (Trikatu, Musta) downregulate mucosal inflammatory cascades and restore barrier integrity. Concurrently, fermented vehicles such as Takra act as postbiotics/synbiotics, replenishing neuroactive SCFAs (acetate, butyrate) that normalize hypothalamic–pituitary–adrenal (HPA) axis reactivity and upregulate hippocampal Brain-Derived Neurotrophic Factor (BDNF).

Conclusion: Re-establishing Agni through Deepana-Pachana and gut-modulating therapeutics offers an evidence-informed, upstream target for affective pathology. Integrating Kayachikitsa principles with neuro-gastroenterology provides a viable, bidirectional paradigm for multimodal psychiatric care.

OP-53: Role of Ayurveda interventions in the management of menieres disease

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Sri Sri College Of Ayurvedic Science and Research

Aims/Objectives: To assess the role of ayurveda interventions and symptomatic relief in managing Meniere\'s disease in a geriatric female, emphasizing non-invasive restoration of auditory-vestibular equilibrium and quality of life enhancement.

Methods: In this case report, the 64-year-old female underwent a 5-day intensive Ayurvedic treatments. Interventions included Basti(enema) with Asanabilwadi Taila for the systemic Vata shamana, Karnapoorana(filling ears with warm oil) using Kshirabala 101 Taila and internally Sarivadi Vati. Pre- and post-therapy evaluations encompassed pure-tone audiometry (PTA), tunning fork and vestibular functional tests.

Results: Notable clinical improvements manifested PTA thresholds improved by 25 dB (from 45 dB to 20 dB in left ear), tinnitus volume, vertigo and aural fullness subsided markedly.

Conclusion: The synergistic application of Asanabilwadi Taila Basti, Karnapoorana with Kshirabala and Sarivadi Vati yielded substantial short-term amelioration in Meniere\'s disease, underscoring Ayurveda\'s efficacy in geriatric otovestibular disorders via dosha-specific Shodhana-Shamana. This supports its role as an effective treatment; extended follow-ups and controlled trials are advocated for enduring validation.

OP-54: Majja dhatu and neuroplasticity an Ayurvedic framework for nerve regeneration and myelination

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Aims/Objectives: To explore the Ayurvedic concept of Majja Dhatu and Majjavaha Srotas and establish a conceptual correlation with contemporary mechanisms of neuroplasticity, nerve regeneration, and myelination/remyelination.

Methods: A narrative review was conducted using classical Ayurvedic texts including Charaka Samhita, Sushruta Samhita and Ashtanga Hridaya, along with contemporary scientific literature related to neuroplasticity, axonal regeneration, myelination, remyelination, Schwann-cell biology and oligodendrocyte-mediated repair. Relevant literature was reviewed to develop an Ayurveda–modern neuroscience integrative framework.

Results: Ayurvedic descriptions of Majja Dhatu emphasize its relationship with Asthi, nourishment and structural integrity, while Majjavaha Srotas provides a specific framework for the transportation and maintenance of Majja. Charaka describes Asthi and Sandhi as the Moola of Majjavaha Srotas. In contemporary neuroscience, neural recovery involves multiple mechanisms, including axonal sprouting, synaptic remodeling, neurogenesis in selected regions, Schwann-cell-mediated peripheral nerve repair and oligodendrocyte-mediated remyelination. These processes collectively contribute to restoration and adaptation of neural function. From an Ayurvedic perspective, concepts such as Majja Dhatu Poshana, Brimhana, Snehana, Vata management and Rasayana may provide a conceptual basis for exploring strategies that support neurological nourishment, protection and functional recovery. However, these Ayurvedic concepts should not be considered direct anatomical equivalents of neurons, glial cells or myelin. Their relationship with cellular mechanisms of neuroregeneration and remyelination requires experimental and clinical validation.

Conclusion: Majja Dhatu and Majjavaha Srotas provide a potentially valuable Ayurvedic framework for understanding neurological integrity and recovery. When interpreted alongside contemporary concepts of neuroplasticity, axonal regeneration and remyelination, they may provide a basis for developing interdisciplinary research hypotheses in neurological disorders. Future research integrating Ayurvedic interventions with objective neurological outcomes, nerve-conduction studies, neuroimaging, and molecular biomarkers may help establish the clinical relevance of this conceptual correlation.

OP-55: Glycated haemoglobin levels and geriatric depression impact cognitive status in an Indian urban elderly community

Swathi B H, *Research Scholar, TDU*

Aims/Objectives: The study sought to describe the cognitive status of older adults in India and to determine whether age-related cognitive change is linked to glycated haemoglobin (HbA1c), vitamin B12, and geriatric depression.

Methods: The sample comprised 123 consenting urban adults aged 55 to 85 years living in the community, none of whom had a clinical history of cognitive or neurological disorders. Demographic details were recorded, and participants were tested across several cognitive domains. HbA1c and vitamin B12 levels were measured from blood samples. Petersen\'s criteria were applied to classify Mild Cognitive Impairment (MCI), and stepwise multiple regression was used to determine which factors predicted Montreal Cognitive Assessment (MoCA) scores.

Results: Cognitive performance in every domain

fell as age increased, as anticipated. Higher HbA1c was associated with slower processing speed and poorer executive function, while vitamin B12 showed no relationship with any cognitive measure. Greater geriatric depression was associated with weaker visuospatial ability. Regression analysis showed that HbA1c and geriatric depression jointly accounted for 28% of the variance in MoCA scores, whereas age made no significant contribution. MCI was identified in 17% of the participants. Relative to those without MCI, participants with MCI had higher HbA1c and depression scores and performed worse in all cognitive domains.

Conclusion: Although cognition declined with age, HbA1c and geriatric depression were stronger contributors to cognitive decline than age. In light of India\'s high diabetes burden, these results draw attention to metabolism-related cognitive changes that are frequently overlooked in community-dwelling older adults and merit greater clinical attention.

OP-56: Management of GNE myopathy in Ayurveda a case series on integrative approach to progressive neuromuscular weakness

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Aims/Objectives: Ayurveda recognizes GNE Myopathy as Adibalapravritta Asadhya Vyadhi and provides a systemic approach through assessment of Dosha Dushya Srotas with emphasis on Vata-shamana and preservation of functional capacity.

Methods: Case 1: A 21-year-old male, born to consanguineous parents, presented with a 3-year history of progressive imbalance while walking, bilateral upper- and lower-limb weakness, muscle wasting and high-stepping gait. Investigations revealed sensorimotor polyradiculoneuropathy. Whole-exome sequencing confirmed Nonaka myopathy with an autosomal recessive pattern. On examination, bilateral hypotonia, reduced muscle power, diminished deep tendon reflexes and difficulty in tandem walking and heel-shin testing were observed. The condition was clinically correlated with Adibalapravritta Kaphavrita Vata due to Beejabhagavayava dushti. Case 2: A 23-year-old female, elder sibling of the case 1 presented with one year history of frequent fall and bilateral foot drop. NCS revealed sensorimotor polyradiculoneuropathy. On examinationobservation were similar to case 1 but no wasting of muscles. She was diagnosed with the same. Intervention: Both patients underwent Ayurvedic treatment protocol consisting of Sadhyovirechana, Shashtika Shali Pinda Sweda, Yapana Basti, Ashtavarga, Guggulutiktaka Kashaya and Brihatvata Chintamani. The treatment was administered from 1st May to 14th

June in case 1 and 3rd April to 1st June 2025 in case 2.

Results: Subjective improvement was reported in muscle strength and walking ability in both cases. Objectively, muscle power of both lower limbs improved from 2/5 to 3/5, bilateral hypotonia, plantar reflexes changed from diminished to normal, and both patients demonstrated improved ability to perform tandem walking and heel-shin test.

Conclusion: This case series highlights the potential role of Ayurvedic approach in the supportive management of genetically determined neuromuscular disorders. Interventions directed towards Vata-shamana may contribute to improvement in functional strength and potentially enhance quality of life. The findings are preliminary and warrant systematic evaluation through larger case series and prospective clinical studies with standardized functional and objective outcome measures.

OP-57: Probable mechanism of nasya karma in ardita Bells palsy an integrative Ayurvedic and neuroanatomical perspective

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Aims/Objectives: To propose possible mechanisms by which Nasya may support facial nerve recovery in Ardita, using Ayurvedic and neuroanatomical reasoning, while stating clearly what current evidence does and does not support.

Methods: 1. Ayurveda Nasa is described as the gateway to the head (नासा हि शिरसो द्वारम्). Sneha Nasya pacifies aggravated vata, nourishes (Brimhana) the facial nerves and muscles, and relieves stiffness and dryness. 2. Trigeminal Pathway The trigeminal nerve supplies the nasal mucosa. Lipophilic medicated oil may reach the brainstem, where the trigeminal and facial nuclei lie close together and are functionally linked. Nose-to-brain transport along olfactory and trigeminal pathways is supported by animal and pharmacological studies; direct delivery to the facial nerve has not been shown in humans. 3. Vascular Rich nasal mucosal vascularity permits absorption of oil constituents, with possible anti-inflammatory and local circulatory effects. Massage and steam used with Nasya may reduce congestion and improve blood flow to the face.
Results: This integrative analysis suggests three converging mechanisms. Ayurvedically, Sneha Nasya pacifies aggravated vata and nourishes (Brimhana) facial nerves and muscles. Neuroanatomically, trigeminal innervation of the nasal mucosa and the close relation of trigeminal and facial nuclei offer a plausible pathway for nose-to-brain transport of lipophilic oil

constituents. Vascularly, rich mucosal absorption may add anti-inflammatory and circulatory effects. Direct delivery to the facial nerve remains unproven in humans.

Conclusion: Nasya may aid recovery in Ardita through combined neurotrophic, anti-inflammatory, vascular, and autonomic effects, alongside standard care, but this requires validation through well-designed clinical research.

OP-58: Management of chronic kidney disease through Ayurveda- a case report on management efficacy and outcomes

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Aims/Objectives: To document the Ayurvedic management of Chronic Kidney Disease (CKD) through an individualized multimodal approach and assess changes in selected biochemical parameters and clinical symptoms during management.

Methods: A single-case report was documented in a 47-year-old male with CKD and hypertension who presented with burning micturition. Examination revealed sallow appearance, costovertebral tenderness and bilateral pitting edema. Baseline investigations showed serum creatinine 3.6 mg/ dL, blood urea 77 mg/dL, serum uric acid 6.1 mg/dL and positive urinary albumin. The patient was managed with an individualized Ayurvedic protocol comprising Sarvanga Abhyanga with Mahanarayana Taila followed by Yoga Basti, including Anuvasana Basti with Gandharvahastadi Eranda Taila and Niruha Basti with Rasnadi Kashaya. Internal medications included Neeri KFT syrup, Punarnava, Gokshura, Shigru and Arjuna powder, Amrutottara Kashaya and Varunadi Ghrita. Serial assessment of serum creatinine and serum uric acid was performed along with documentation of symptomatic changes.

Results: Serum creatinine decreased from 3.6 mg/dL to 2.1 mg/dL, while serum uric acid decreased from 6.1 mg/dL to 5.2 mg/dL at the last documented assessment. Symptomatic improvement was also documented during management.

Conclusion: The case demonstrated improvement in selected biochemical parameters and symptoms following individualized Ayurvedic multimodal management. However, as a single case report, these observations cannot establish treatment efficacy or causality. Further systematic clinical studies are warranted to evaluate the clinical significance and reproducibility of these findings.

OP-59: Ayurveda management of traumatic retinal detachment a case report

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Aims/Objectives:
Background: Retina is a specialized neural tissue essential for processing visual impulses. Any discontinuity in the integrity of this tissue is termed as Retinal detachment and this is a sight-threatening disorder. As the retina represents a specialized neural tissue essential for visual processing, retinal disorders have relevance to the broader neuroscience of vision. Contemporary management depends on the type and extent of detachment and may require surgical intervention. Evidence regarding conservative Ayurvedic approaches remain relatively unexplored. Aims: To explore the observed clinical and anatomical changes following an Ayurvedic treatment protocol incorporating shodhana and shamana chikitsa in a patient with retinal detachment.

Methods: A 28-year-old male presented with blurred vision in the left eye for three years. Uncorrected distant visual acuity was 6/120 in the affected eye. Optical Coherence Tomography (OCT) demonstrated retinal separation measuring approximately 1200 µm. The patient underwent classical Vamana followed by shamana chikitsa comprising internal medication and sthanika chikitsa. Clinical visual assessment and OCT findings were documented before and after treatment.

Results: Following the treatment protocol, OCT demonstrated reduction in retinal separation from approximately 1200 µm to 400 µm. The patient also reported subjective improvement in distant vision.

Conclusion: This case documents observed anatomical and subjective visual improvement following an Ayurveda protocol in retinal detachment. It highlights a potential area for interdisciplinary exploration of Ayurveda approaches in disorders involving neurosensory visual tissue and underscores the need for systematic clinical research with objective ophthalmic and neurological outcome measures.

OP-60: Effects of an integrated Yoga on heart rate variability menstrual pain and psychological well-being in females with primary dysmenorrhea a randomized controlled trial with mediation analysis

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Dr. Sanjib K Patra, Professor

Aims/Objectives: To investigate the effects of a 4-week Integrated Yoga Intervention (IYI) on menstrual pain, heart rate variability (HRV), and psychological well-being in female university students with PD, and to explore whether changes in HRV and psychological outcomes mediate the intervention-related reduction in pain.

Methods: In this prospective, parallel-arm RCT, 60 female university students aged 18–25 years with moderate-to-severe PD were randomly allocated to IYI (n = 30) or walking control(WC) (n = 30) for four weeks of intervention (four sessions/week; 60 min/session). Data were collected at baseline and post-intervention on the second day of menstruation. Outcome measures included Visual Analogue Scale(VAS) for pain, frequency-domain HRV (LF,HF,LF/HF ratio), and Depression, Anxiety and Stress Scale-21(DASS-21). Per-protocol (PPA) and intention-to-treat analyses(ITT) were performed with a separate mediation analysis to examine the potential mediating role of HRV and psychological variables in pain reduction.

Results: Forty-eight participants (IYI = 26; WC = 22) completed the study, with no significant baseline differences between groups ($p > 0.05$). In both PPA and ITT analyses, IYI produced greater improvements in pain and cardiac autonomic regulation, with reduced LF and LF/HF ratio and increased HF ($p < 0.001$). PPA additionally showed significantly lower stress, anxiety, and depression scores in the IYI group ($p < 0.05$), while in ITT analysis, depression remained significantly improved and stress and anxiety showed favourable but non-significant trends. Mediation analysis demonstrated significant indirect effects of IYI on pain through LF ($\beta=-1.116$, $p=0.012$) and HF ($\beta=-1.110$, $p=0.012$), whereas LF/HF ratio, stress, anxiety, and depressionn did not significantly mediate pain reduction.

Conclusion: A four-week biopsychosocially informed IYI improved menstrual pain, autonomic regulation, and psychological outcomes in women with PD. Significant mediation through LF and HF suggests that autonomic modulation may be an important physiological pathway underlying pain reduction. It supports IYI as a safe, non-pharmacological adjunct therapy for managing PD.

OP-61: Impact of an 8-week Yoga intervention on emotion regulation and cardiac autonomic activity a pilot randomized controlled trial

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Central University of Rajasthan

Aims/Objectives: Emotion regulation plays an important role in psychological and social well-being. Difficulties in emotion regulation are associated with adverse psychological outcomes, and yoga may influence emotion regulation through psychological and autonomic pathways. The aim of the study is to examine the effects of an 8-week yoga intervention on emotion regulation and autonomic activity, and to investigate HRV responses across emotional processing conditions in young adults.

Methods: In this pilot randomized controlled study, 30 young adults (15 per group; 8 females and 7 males/group) were randomized to yoga or walking control. Both groups completed 45-minute sessions, 4 days/week for 8 weeks. Emotion regulation was assessed using the Difficulties in Emotion Regulation Scale (DERS). HRV was assessed during neutral, negative-viewing, and negative-reappraisal conditions at pre- and post-intervention. Outcomes included SDNN, LF/HF, LF, HF, and RMSSD. Repeated-measures ANOVA examined Group, Time, Condition, and interaction effects, with Greenhouse–Geisser correction and Holm-adjusted post-hoc comparisons.

Results: DERS showed a significant Group × Time interaction, $F(1,28)=6.12$, $p=.020$, $\eta^2p=.179$, with scores decreasing in yoga (96.67±19.55 to 93.27±20.33) and increasing in walking (87.93±18.91 to 98.67±24.44). HRV showed significant Condition effects for SDNN, LF/HF, LF, and HF, and a Time effect for LF/HF. No significant Group × Time or Group × Condition × Time interactions were observed for HRV.

Conclusion: This pilot study demonstrated differential change in emotion regulation following yoga compared with walking, while HRV differed significantly across emotional processing conditions, with an overall time-related change observed for LF/HF. These preliminary findings support further investigation of yoga, emotion regulation, and autonomic function.

OP-62: Indian classical instrumental music using Raga Yaman restores chronic subacute pain-related behaviours and biomarkers

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Mr. Kanchan Mukherjee, Research Fellow
Dr. Rakhi Dey Sharma, Assistant Professor
University of Calcutta

Aims/Objectives: A significant number of adults suffer from chronic pain globally, whereas traditional medications often exert side effects yielding incomplete relief. Based on prior research showing that Indian classical instrumental music (IIM) reduces subacute pain, this study testesd the effectiveness in a chronic constriction injury mouse model. Exposing mice to four hours of daily IIM aimed to relieve mechanical allodynia and thermal hyperalgesia while mapping peripheral, spinal, and supraspinal neural mechanisms to restore locomotion, anxiety, and cognitive function.

Methods: Swiss albino mice were randomly divided into four experimental cohorts: control, nerve-injured, nerve-injured with music exposure, and music-only. A chronic constriction injury model was created through sciatic nerve ligation over two weeks. During this period, the music-treated groups listened to daily four-hour sessions of traditional ragas. Researchers conducted extensive behavioral testing, evaluating open field movements, maze exploration, light-dark transitions, object recognition, feeding latency, and sucrose preference to assess changes in anxiety, depression, and cognitive recovery. Pain sensitivity was measured using specialized mechanical and thermal withdrawal assays. Non-parametric statistical methods accounted for group size constraints under institutional ethics approval.
Results: Indian instrumental music (IIM) significantly attenuated CCI-induced neurobehavioral deficits exceeding subacute model gains. IIM exposure produced over a two-fold increase in antinociceptive latencies (PWL/TFL), while improving thermal thresholds and reducing mechanical sensitivity. Locomotor recovery surged 3.5-fold in distance traveled and two-fold in mean speed. IIM exerted strong anxiolytic and antidepressant effects, showing up to five-fold anxiety reductions, a four-fold increase in NSF food consumption, and enhanced sucrose preference. Additionally, IIM rescued cognitive performance, doubled exploratory drive, and modulated spinal neurochemistry and gene expression, validating its capacity to restore neurobehavioral homeostasis.

Conclusion: Indian instrumental music ameliorated chronic neuropathic pain reducing nociception and improving motor, cognitive, and affective functions. These neurobiological findings pave for future personalized pain and stress management.

OP-63: Charakokta medhya rasyana drugs neurobiological evidence and translational gaps

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Background: Medhya Rasāyana is an Ayurvedic category associated with intellect, memory, and mental resilience. Four Charakokta drugs (Centella asiatica, Tinospora cordifolia, Glycyrrhiza glabra, and Convolvulus pluricaulis) have been studied experimentally, but diverse findings are often grouped loosely as "nootropic" or "neuroprotective," obscuring differences in evidence strength.

Objective: To map neurobiological evidence for these drugs across distinct domains and identify gaps between experimental findings and clinical cognitive benefits

Methods: A focused narrative review of classical texts and PubMed literature was conducted using species names combined with cognition, neurobiology, and synaptic-plasticity terms. Evidence was organized into four domains: behavioural outcomes, neurochemical/molecular mechanisms, synaptic plasticity, and neuroprotection. Preparation, model, dose, and clinical evidence were noted where reported.

Results: Evidence was predominantly preclinical and heterogeneous. C. asiatica showed behavioural, antioxidant, mitochondrial, neurotrophic, and plasticity-related effects. T. cordifolia improved behaviour in stress and sleep-deprivation models with changes in plasticity markers. G. glabra showed memory-enhancing, antioxidant, anti-inflammatory, and neuronal-survival effects, with limited plasticity data. C. pluricaulis improved cognition and, in one study, modulated hippocampal long-term potentiation and depression. Glial mechanisms were rarely examined. Clinical evidence was sparse; a meta-analysis of C. asiatica found no significant overall cognitive improvement versus placebo, though alertness and mood effects were reported.

Conclusion: Evidence was predominantly preclinical and heterogeneous. C. asiatica showed behavioural, antioxidant, mitochondrial, neurotrophic, and plasticity-related effects. T. cordifolia improved behaviour in stress and sleep-deprivation models with changes in plasticity markers. G. glabra showed memory-enhancing, antioxidant, anti-inflammatory, and neuronal-survival effects, with limited plasticity data. C. pluricaulis improved cognition and, in one study, modulated hippocampal long-term potentiation and depression. Glial mechanisms were rarely examined. Clinical evidence was sparse; a meta-analysis of C. asiatica found no significant overall cognitive improvement versus placebo, though alertness and mood effects were reported.

OP-64: Beyond macular edema a clinical and neurovascular perspective on integrative management of macular BRVO

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Aims/Objectives: To document the clinical response to integrative management of macular branch retinal vein occlusion (BRVO) with cystoid macular edema (CME) using multimodal structural and functional visual assessment, and to interpret the observed changes from a retinal neurovascular perspective.

Methods: A longitudinal case assessment was conducted in a 60-year-old woman diagnosed with macular BRVO with CME in the left eye. Clinical evaluation included visual acuity, fundus examination and fundus photography, while structural retinal changes were assessed using optical coherence tomography (OCT). Functional visual assessment additionally included contrast sensitivity and Amsler grid testing. The patient underwent integrative management incorporating Ayurveda-based treatment and was followed with serial clinical and imaging assessments. Previous intravitreal anti-VEGF treatment was considered while interpreting the subsequent clinical course. Baseline documentation demonstrated macular BRVO with intraretinal cystic changes and increased macular thickness.

Results: Following integrative management, improvement was observed in visual acuity, contrast sensitivity and Amsler grid responses. OCT showed reduced in retinal thickness and macular edema.

Conclusion: The case demonstrates the utility of an integrated structural–functional clinical assessment in documenting outcomes of integrative management in macular BRVO with CME. The concordant improvement in OCT, visual acuity, contrast sensitivity and Amsler grid responses provides multidimensional clinical evidence of improvement. Viewing the retina as a neurovascular tissue further provides a clinically relevant framework for exploring the relationship between vascular pathology, macular structure and visual function. Further systematic studies are warranted to evaluate these observations.

OP-65: Crinum latifolium ameliorates cognitive dysfunction associated with chronic iron overload in wistar rats

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Aims/Objectives: Ethnopharmacological relevance Crinum latifolium Linn (CL), traditionally known as 'Sukhdarshan', is a bulbous monocot used in Indian traditional medicine for memory-related ailments. CL has recognized anti-cholinesterase, antioxidant and anti-inflammatory properties, however, its neuroprotective potential against iron overload-associated cognitive dysfunction has not been established.

Aim of the study Chronic iron overload promotes oxidative stress, neuroinflammation, iron dysregulation, and neuronal injury, contributing to cognitive decline and neurodegeneration. This study investigated the neuroprotective effects of CL against iron overload-induced cognitive impairment and explored the potential contribution of oxidative, inflammatory, and iron-homeostatic pathways.

Methods: Iron overload was induced in Wistar rats by chronic dietary iron supplementation. Animals were assigned to control, iron-overload, CL extract, and CL extract plus alpha-lipoic acid (ALA) groups. Cognitive function was assessed using the Morris water maze and Y-maze paradigms. Oxidative stress, serum biochemical parameters, and brain and liver histopathological alterations were evaluated to determine the neuroprotective efficacy. Brain expression of inflammatory markers and iron transporters was assessed by real-time PCR.

Results: CL reduced serum iron and haemoglobin levels and improved cognitive performance in iron-overloaded rats. It reduced lipid peroxidation, restored antioxidant defences, and attenuated biochemical and histopathological alterations. CL downregulated Nf-kb and Il-6 and reduced Dmt1, Fth1, and Hamp expression, with greater effects observed following CL+ALA treatment.

Conclusion: CL exhibits neuroprotective effects against iron overload-induced cognitive impairment by attenuating oxidative stress, inflammation, and iron dysregulation, suggesting potential as a candidate for mitigating ferroptosis-associated neurodegeneration.

OP-66: Development validation and feasibility of integrative therapy module for cerebrovascular stroke

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SVYASA

Aims/Objectives: To develop and validate the integrated stroke management protocol (ISMP) that includes Ayurveda, Yoga and Naturopathy in post-stroke rehabilitation

Methods: Development of module was based on earlier reseearch evidences . And, validation of ISMP was done by using Delphi method involving 20 experts of Ayurveda, yoga and naturopathy physicians. Data was analysed using Lawshe's formula , The feasibility and reliability was documented in Arogyadhama holostic health hospital,by clinical application of this module to 52 participants recruited for ISMP at the integrated health home of the yoga university. Symptom score and vital parameters were assessed after the intervention

Results: The ISMP consisting of 32 items based on literature review and our earlier experience at the centre, was presented to a team of 20 experts for content validation using Delphi method. Of these, 29 practices had an acceptable CVR score (≥0.4) indicating high validity. Implementing this module in a weeklong residential therapy at the university facility showed significant reduction in Symptom score by 38.4%, Systolic blood pressure by 8.3%, Diastolic blood Pressure by 6.5%, Respiratory rate by 18%, Pulse rate by 6.3% and increase in exhalation time (Bhramari time) by 64%.there was no adverse effects .

Conclusion: The integrated therapy module for post-stroke rehabilitation that includes yoga , naturopathy and Ayurveda has significant CVR score. It has resulted in reduction of vital parameters and symptom scores/

OP-67: Ayurvedic determinants of immunity modulatory roles of hra vihra and cra in enhancing vydhikamatva

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Aims/Objectives: Ayurveda conceptualizes Vyādhikṣamatva as the inherent capacity of the body to resist disease, limit its progression, and restore physiological equilibrium. Unlike a pathogen-centric concept of immunity, Vyādhikṣamatva encompasses the integrated strength of Agni, Dhātu, Ojas, and the overall harmony of bodily and psychological functions. The present study aims to explore the modulatory roles of Āhāra (diet), Vihāra (lifestyle), and Ācāra Rasāyana (wholesome behavioral conduct) in maintaining physiological homeostasis and enhancing disease resistance.

Methods: A narrative review was undertaken through critical analysis of classical Ayurvedic texts, including Caraka Saṃhitā, Suśruta Saṃhitā, and Aṣṭāṅga Hṛdaya, along with relevant contemporary biomedical literature concerning nutritional immunology, circadian biology, sleep physiology, stress physiology, and psychoneuroimmunology. Classical concepts were interpreted in the context of contemporary understanding of metabolic, endocrine, neurophysiological, and immune regulation.

Results: The review indicates that appropriate Āhāra supports Agni and optimal Dhātu nourishment, thereby contributing to the maintenance of Ojas and systemic resilience. Appropriate Vihāra, including Dinacaryā, Ṛtucaryā, adequate physical activity, and restorative Nidrā, may support circadian organization, metabolic stability, and physiological recovery. Ācāra Rasāyana, through regulation of conduct, emotions, social interactions, and psychological responses, may contribute to stress regulation and maintenance of neuroendocrine-immune homeostasis. Collectively, these determinants demonstrate the Ayurvedic understanding of immunity as a dynamic and multidimensional phenomenon.

Conclusion: Vyādhikṣamatva represents an integrated state of systemic resilience arising from appropriate nutrition, lifestyle, psychological well-being, and balanced physiological functions. The coordinated practice of Āhāra, Vihāra, and Ācāra Rasāyana provides a holistic, preventive, and non-pharmacological framework for supporting host defense and maintaining health. Further interdisciplinary research integrating classical Ayurvedic parameters with validated biomedical biomarkers may help scientifically elucidate these relationships.

OP-68: Early developmental outcomes in children born after maternal participation in garbhini paricharya a descriptive study using the WHO GSED

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Dr. Umesh Chikkanna, Associate Professor
Dr.Bharath Holla, Associate Professor
Dr. Kishore Kumar R, Professor & Head
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Aim To describe early developmental outcomes and maternal wellbeing among children born to mothers who participated in Garbhini Paricharya.
Methods: Mothers who followed Garbhini Paricharya at an Ayurveda obstetrics and gynecology hospital in Bengaluru completed a demographic questionnaire and the Satisfaction With Life Scale (SWLS). Their children (n=21), aged 1.7–36 months, were assessed using the caregiver-reported World Health Organization (WHO) Global Scales for Early Development (GSED) Short Form. Developmental D-scores and Development-for-Age z-scores (DAZ) were calculated using the D-score package according to the WHO GSED version 1.0 Scoring Guide. Associations with demographic and maternal variables were examined using Spearman correlation and Mann–Whitney U tests.

Results: The mean maternal age was 32.6 years, and all mothers were graduates. Seventy-one percent initiated Garbhini Paricharya before conception, while 90% reported a perceived positive influence on mother–child bonding. None reported postpartum emotional difficulties. The mean DAZ was +1.65 SD (95% CI: 1.14–2.16; $p<0.001$) relative to the GSED Phase 1 reference and +1.28 SD relative to the WHO preliminary standards. No significant age-related trend was observed. Preconception initiation showed a non-significant tendency toward higher DAZ compared with initiation during pregnancy. Maternal life satisfaction was high (SWLS 29.8±2.1) but was not associated with child DAZ.

Conclusion: Children in this cohort whose mothers followed Garbhini Paricharya demonstrated developmental scores above the GSED Phase 1 reference, while mothers reported high life satisfaction and positive bonding experiences. These findings are descriptive and should not be interpreted as evidence of a causal developmental benefit of Garbhini Paricharya, given the single-arm design, small sample, caregiver-reported assessment, and socioeconomically advantaged study population. Furthermore, the Phase 1 reference was derived from a convenience sample and was not intended for benchmarking. Controlled studies using directly administered developmental assessments are warranted.

OP-69: Integrative Ayurveda and Yoga-based management of atypical parkinsonism a case series

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Dr. Hemant Bhargav, Associate Professor
Dr. Kishore Kumar Ramakrishna, Professor and Head

Aims/Objectives: Atypical Parkinsonism comprises a group of neurodegenerative disorders characterised by Parkinsonian features, gait impairment, and postural instability. Integrative approaches that combine Ayurveda and Yoga may offer additional therapeutic perspectives. This case series aims to describe changes in motor performance, gait characteristics, and gait-related fall-risk indicators following an individualised integrative Ayurveda and Yoga intervention.

Methods: Six patients with atypical Parkinsonism underwent an individualised Ayurveda and Yoga protocol for 3–4 weeks, including Sadhyovirechana, Rukshana therapy with Udwartana and Dhanyamladhara, Snigdha-Vatahara management, two courses of Yoga Basti, individualised Shamana medicines, and Yoga-based practices. Outcomes were assessed before and after intervention using the Unified Parkinson's Disease Rating Scale (UPDRS), Functional Ambulation Performance (FAP), and quantitative gait parameters. Gait temporal variability was assessed using the coefficient of variation (CV) of step and cycle time. Findings were summarised descriptively.

Results: Mean UPDRS decreased from 39.7 ± 29.0 to 35.3 ± 25.8, with improvement in four of six patients. Mean FAP increased from 61.7 ± 19.5 to 65.5 ± 18.3, with improvement in four patients. Mean gait velocity increased from 42.5 to 49.9 cm/s, while cadence increased from 76.9 to 90.9 steps/min. Mean step length and stride length increased from 27.3 to 31.0 cm and 55.8 to 62.5 cm, respectively. Notably, step-time CV decreased from 41.8% to 20.4%, indicating improved temporal gait consistency and potentially reduced gait-related fall risk. Cycle-time CV also decreased from 22.6% to 18.0%. Spatial variability showed heterogeneous responses.

Conclusion: : Integrative Ayurveda and Yoga intervention was associated with exploratory improvements in motor function, gait performance, and temporal gait regularity. The marked reduction in step-time variability may indicate improved gait consistency, with potential implications for fall risk reduction. Given the small sample and heterogeneous responses, these findings require confirmation in larger prospective controlled studies

OP-70: Comparative efficacy of mahakukkutamamsa taila and moorchita tila taila matra basti in vataja gridhrasi a randomized controlled trial using the sciatica frequency index and 50-foot walk test

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NIMHANS

Aims/Objectives: To evaluate the effect of Mahakukkutamamsa Taila in Gridhrasi. To evaluate the efficacy of Mahakukkutamamsa Taila Matra Basti in the management of Vataja Gridhrasi. To compare the efficacy of Mahakukkutamamsa Taila Matra Basti and Moorchita Tila Taila Matra Basti in the management of Vataja Gridhrasi.

Methods: In this randomized controlled trial, 40 participants diagnosed with Vataja Gridhrasi were randomized into Group A (n=20), receiving Mahakukkutamamsa Taila Matra Basti, and Group B (n=20), receiving Moorchita Tila Taila Matra Basti, at 72 mL/day for 7 days. The primary outcome was the Sciatica Frequency Index (SFI), a composite measure assessing the frequency of leg pain, numbness/tingling, weakness, and back or leg pain while sitting. Functional ability was assessed using the 50-foot walk test. Assessments were performed at baseline and on days 4, 8, 14, and 21. Longitudinal treatment effects were analysed using generalized estimating equations with robust standard errors.

Results: A significant Group × Time interaction was observed for SFI (Wald $\chi^2(4)=16.42$, $p=0.003$), indicating a significantly different trajectory of symptom improvement between groups. At day 8, the mean reduction in SFI was 9.00 points in Group A compared with 5.80 points in Group B, with a between-group difference of 3.20 points ($p=0.008$). At day 21, the corresponding between-group difference was 3.85 points ($p<0.001$). The 50-foot walk test also demonstrated a significant Group × Time interaction (Wald $\chi^2(4)=10.72$, $p=0.030$). At day 8, walking time decreased by 5.50 seconds in Group A compared with 1.28 seconds in Group B, with a between-group difference of 4.21 seconds ($p=0.010$).

Conclusion: Mahakukkutamamsa Taila Matra Basti demonstrated significantly greater improvement in symptom frequency and functional walking performance than Moorchita Tila Taila Matra Basti in participants with Vataja Gridhrasi.

OP-71: Association of prakriti and guna dimensions with clinical characteristics in individuals with opioid use disorder an exploratory study

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Dr. Hemant Bhargav, Associate Professor of Yoga
NIMHANS

Aims/Objectives: Opioid use disorder (OUD) is clinically heterogeneous, and individual constitutional and psychological characteristics may contribute to differences in its clinical presentation. This study explored associations between Ayurvedic Prakriti and Guna dimensions and clinical characteristics among individuals with OUD.

Methods: A cross-sectional analysis was conducted among 156 individuals with OUD. Prakriti dimensions (Vata, Pitta, and Kapha) and Guna dimensions (Sattva, Rajas, and Tamas) were assessed using the Brief Prakriti Inventory and Vedic Personality Inventory, respectively. Clinical variables included age, age at first opioid use, relapse number, baseline Clinical Opioid Withdrawal Scale (COWS) score, baseline buprenorphine dose, Hamilton Anxiety Rating Scale (HAMA) score, and Work and Social Adjustment Scale (WSAS) score. Spearman rank correlation analyses were performed across 42 profile–clinical comparisons.

Results: Higher Vata scores were inversely associated with age at first opioid use ($\rho = -0.207$, $p = 0.0094$), indicating that greater Vata scores were associated with an earlier age of opioid initiation. Higher Sattva scores were also inversely associated with relapse number ($\rho = -0.196$, $p = 0.0148$), suggesting fewer reported relapses among participants with higher Sattva scores. Additional associations included inverse correlations of Vata with baseline COWS score ($\rho = -0.191$, $p = 0.0169$) and Rajas with baseline buprenorphine dose ($\rho = -0.255$, $p = 0.0013$). Pitta was inversely associated with buprenorphine dose ($\rho = -0.172$, $p = 0.0316$), while Tamas was positively associated with HAMA score ($\rho = 0.164$, $p = 0.0403$). None remained statistically significant after correction for multiple comparisons.

Conclusion: The observed associations of higher Vata with earlier opioid initiation and higher Sattva with fewer relapses provide potentially relevant signals regarding individual differences in the clinical characteristics of OUD. These exploratory findings warrant confirmation in larger prospective studies.

OP-72: Sattvasara in artavakshaya an Ayurvedic perspective on the psychophysiological dimensions of menstrual dysfunction

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Aim: To assess Sattvasara in women with Artavakshaya.

Objectives:
To assess the Sattvasara status among women with Artavakshaya. To compare Sattvasara scores across different presentations of Artavakshaya, namely oligomenorrhea, hypomenorrhea, and combined oligomenorrhea with hypomenorrhea.
Methods: A descriptive observational study was conducted among 96 women aged 16–40 years diagnosed with Artavakshaya. Participants were categorized into oligomenorrhea (n=57), hypomenorrhea (n=15), and combined oligomenorrhea with hypomenorrhea (n=24). Sattvasara was assessed using a standardized Ayurvedic assessment tool. Descriptive statistics and the Kruskal–Wallis test were used for analysis, with statistical significance set at $p<0.05$.

Results: The overall Sattvasara score was 9.11±2.12. Mean scores were 8.95±2.22 in oligomenorrhea, 9.40±2.06 in hypomenorrhea, and 9.33±1.95 in the combined group. Median scores were 9, 10, and 10, respectively, showing comparatively lower Sattvasara scores in the oligomenorrhea group. The statistical significance of differences across groups was assessed using the Kruskal–Wallis test.

Conclusion: Sattvasara scores showed modest variation across Artavakshaya presentations, with comparatively lower scores observed in oligomenorrhea. The findings suggest a potential psychophysiological dimension to menstrual dysfunction that merits further investigation through an integrated Ayurvedic and contemporary physiological framework.

OP-73: Feasibility and efficacy of daruharidra Berberis aristata on anthropometric and metabolic parameters in patients with antipsychotic-induced weight gain and metabolic syndrome

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NIMHANS, Bengaluru

Aims/Objectives: To assess the feasibility and preliminary effects of oral daruharidra on body weight and metabolic parameters in patients with antipsychotic-induced weight gain and metabolic syndrome.

Methods: A single-arm, open-label, pre–post feasibility study was conducted in 15 participants receiving antipsychotic treatment. Participants received oral daruharidra for 90 days. The primary outcome was change in body weight. Secondary outcomes included waist circumference (WC), hip circumference (HC), mid-arm circumference (MAC), triglycerides (TG), total cholesterol (TC), LDL, HDL, VLDL, and fasting blood sugar (FBS). Changes from baseline to day 90 were analyzed using likelihood-based linear mixed-effects models, with time as a fixed effect and participant as a random effect, under the assumption of missing at random.

Results: Body weight decreased from 89.90 ± 14.82 kg at baseline to 86.78 ± 14.89 kg at day 90, with an estimated mean reduction of 3.12 kg (95% CI −3.77 to −2.46; $p<0.001$). Significant reductions were observed in WC (−4.17 cm), HC (−3.40 cm), and MAC (−1.83 cm; all $p<0.001$). TC (−26.53 mg/dL; $p=0.002$), LDL (−18.68 mg/dL; $p=0.002$), and VLDL (−18.78 mg/dL; $p<0.001$) decreased, while HDL increased by 5.30 mg/dL ($p<0.001$). FBS decreased by 23.87 mg/dL (95% CI −39.33 to −8.42; $p=0.002$). TG decreased by 53.13 mg/dL but did not reach statistical significance ($p=0.093$).

Conclusion: Interim findings indicate favourable changes in body weight, anthropometric measures, and several metabolic parameters following 90 days of daruharidra administration. These preliminary findings warrant evaluation in a larger, adequately powered controlled study.

OP-74: Effect of basti and nasya on neurodegenerative models - evidence from preclinical animal experiments

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Aims/Objectives: Basti and Nasya are the prime line of management in most of the neurodegenerative diseases of brain. Basti chikitsa is justified as there is involvement of shiro marma, in the samprapti and nasya is practiced as the nose is the gateway to reach shiras. Both these treatments have shown excellent results clinically in different levels of neurodegenerative diseases. Even though the mode of action of these treatments can be explained well based on the concepts of Ayurveda; it is the need of the hour to provide evidence which shows the level and range of changes occurring in the brain after these treatments. As reverse pharmacology, few of the animal experimentations have been carried out on basti and nasya to know more about the changes in the brain cells after these treatments.

Methods: The selected rats were treated with animal dose of basti and nasya in a specified course.

Results: The animals treated with basti and nasya have shown comparatively better results in muscle tone, power and memory. The histopathological study of brain cells has shown neuroprotective effects though basti which was not observed in nasya.

Conclusion: These studies have shown evidence for the benefits and limitations of basti and nasya in the treatment of different neurodegenerative diseases.

OP-75: Development and feasibility testing of krida Yoga group programme for inpatients of the integrative medicine department IMD NIMHANS

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Dr. Aarti Jagannathan, Professor
Dr. Nishitha Jasti, Scientist B
NIMHANS

Aim: To develop and test the feasibility of a Krida Yoga Group Programme for in-patients with neurological and psychiatric conditions admitted to the Department of Integrative Medicine, NIMHANS.

Objectives To develop the Krida Yoga Group Programme To test the feasibility of the Krida Yoga group programme

Methods: A sample of 30 inpatients having neurological and psychiatric conditions participated in a 15-day, thrice-weekly, 1-h Krida yoga programme conducted by the researcher, a certified yoga trainer. Tools such as the Perceived Stress Scale-14 (PSS-14) and WHO Well-being Scale (WHO-5) were used to assess the pre- and post-effects of the Krida yoga programme on days 0 and 15.

Results: Pre- and post-quantitative findings indicated a significant reduction in stress from 35.20 (5.51%) to 19.86 (3.9%) and an improvement in well-being from 9.36 (1.67%) to 15.93 (1.93%). Thematic analysis of the qualitative data collected from the inpatients supported the quantitative findings. The triangulated quantitative and qualitative findings suggested moderate to high feasibility of the Krida yoga group programme for inpatients in mental health settings. Conclusion: Based on these results, it can be concluded that the Krida yoga programme is feasible to conduct and should be tested for its effectiveness in future randomized controlled trials.

OP-76: Seasonality and psychiatric exacerbation exploring seasonal patterns for preventive psychiatric care through an Ayurvedic ritu framework

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Aims/Objectives:
Background: Seasonal and environmental factors may influence the onset and exacerbation of psychiatric disorders. However, evidence from tropical settings and integration with Ayurvedic concepts of Ritu remains limited. Understanding seasonal patterns may help anticipate periods of increased psychiatric vulnerability and emergency-care needs. Aims: To evaluate seasonal variation in acute psychiatric presentations and examine diagnosis-specific and severity-related patterns using an Ayurvedic Ritu-based framework.

Methods: Methods: A retrospective observational study was conducted using the Psychiatric Short Stay Ward registry of NIMHANS, Bengaluru, covering 01 June 2023 to 31 July 2024. Acute psychiatric emergency visits and hospitalisations were analysed using negative binomial regression and generalized additive models, adjusting for day of week and temporal trends. Seasonal patterns were assessed across diagnostic groups, clinical severity indicators, and six Ayurvedic Ritus.

Results: A total of 10,356 acute psychiatric emergency visits across 427 days were analysed. Overall, the presentations demonstrated significant non-linear seasonality ($p<0.001$). Bipolar manic/hypomanic and bipolar depressive presentations showed strong diagnosis-specific seasonal variation, while unipolar depression demonstrated weaker but significant seasonality. Parenteral benzodiazepine use, antipsychotic use, and admissions also demonstrated significant seasonal variation ($p<0.001$), suggesting variation in clinical intensity. Compared with Śiśira, emergency presentations were higher in Vasanta (IRR 1.05), Grīṣma (1.08), Varṣā (1.12), and Śarad (1.06), while lower in Hemanta (0.97).

Conclusion: Acute psychiatric emergencies demonstrate significant seasonal and Ritu-wise variation, particularly across bipolar mood states. Higher emergency burden during Grīṣma and Varṣā corresponds with Ayurvedic concepts of reduced Bala. Integrating seasonal psychiatric surveillance with Ritu-based preventive strategies may support anticipatory and context-sensitive mental healthcare in tropical settings

OP-77: Integrative management of post-traumatic compressive cervical myelopathy a case report with functional outcome assessment

Dr Sreekutty, *Faculty*
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Aims/Objectives:
Aim:To evaluate the functional outcomes following integrative Ayurvedic management and physiotherapy in a patient with post-traumatic compressive cervical myelopathy.

Objectives:
1.To assess changes in neurological and functional status before and after treatment using the Modified Japanese Orthopaedic Association (mJOA) score.
2.To evaluate changes in limb stiffness, sitting balance, ambulation, and functional mobility following treatment.
3.To document the clinical outcomes of integrative Ayurvedic interventions and physiotherapy in the management of post-traumatic compressive cervical myelopathy.

Methods: A 67-year-old male with a history of type 2 diabetes mellitus presented with progressive weakness of all four limbs, difficulty in walking, upper limb stiffness and numbness, loss of manual dexterity, and urinary incontinence following a fall from a height of 12 feet.MRI findings revealed cervical cord contusion and multilevel cervical spondylotic changes causing neural compression. The condition was diagnosed as post-traumatic compressive cervical myelopathy and assessed in Ayurveda as Sarvangaroga. Treatment included Abhyanga, Nadi swedam,Kayaseka, Shashtika Pinda Sweda, Mamsa Kizhi, Mustadi yapana Basti and Nasya

Results: Notable improvement was observed in upper limb stiffness, sitting balance, and ambulation with support. Functional assessment using the Modified Japanese Orthopaedic Association (mJOA) score demonstrated improvement from 6 (severe myelopathy) before treatment to 8 after treatment, indicating enhanced neurological and functional status

Conclusion: This case suggests that Ayurvedic interventions, along with physiotherapy may serve as an effective supportive therapeutic strategy in improving functional outcomes and quality of life in patients with post-traumatic compressive cervical myelopathy. Further clinical studies are warranted to substantiate these findings.

OP-78: Shirodhara and heart rate variability understanding the brainheart connection

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Aims/Objectives: To explain the possible physiological relationship between Shirodhara and HRV through the anatomical and functional interconnection between the brain, autonomic nervous system and heart. To describe the anatomical pathways involved in brain–heart communication. To explain the role of the sympathetic and parasympathetic nervous systems in stress regulation and HRV. To explore the possible role of forehead sensory stimulation and central autonomic networks in the effects of Shirodhara.

Methods: A narrative review approach is used to explain the anatomical and physiological basis of brain–heart interaction and its possible relationship with Shirodhara. Relevant concepts from neuroanatomy, autonomic physiology, stress regulation and HRV research are considered to develop a theoretical framework linking forehead sensory stimulation, central autonomic networks, vagal modulation and cardiac rhythm. The proposed mechanisms are discussed in relation to existing scientific knowledge, while distinguishing established physiological pathways from hypotheses specific to Shirodhara.

Results: The review highlights that brain–heart communication involves the hypothalamus, limbic system, brainstem autonomic centres, vagus nerve, sympathetic cardiac nerves and cardiovascular receptors. HRV reflects the dynamic regulation of cardiac rhythm and is influenced by vagal activity, respiration and other physiological factors. Shirodhara may promote relaxation and influence stress-related autonomic responses. However, the proposed involvement of trigeminal sensory pathways and central autonomic networks, and the extent to which these mechanisms produce changes in HRV, require further direct investigation.

Conclusion: Shirodhara offers a potential Ayurvedic approach to relaxation that can be explored through the modern physiological framework of brain–heart interaction. Its possible influence on HRV may involve changes in psychological arousal, autonomic regulation and respiratory patterns. HRV may serve as a useful non-invasive measure for investigating these effects. Further well-designed clinical studies are required to establish whether Shirodhara produces consistent changes in HRV and to clarify the underlying mechanisms.

OP-79: An integrative approach to the management of low back ache a case series

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Dr. Kishore Kumar Professor,HOD
Dr. Hemanth Bhargav, Associate professor
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Aims/Objectives: Low back pain is a common musculoskeletal condition that may result in pain, restricted mobility and functional disability. Patients with persistent or recurrent symptoms, particularly those with radiating lower-limb symptoms and degenerative lumbar changes, may require multimodal conservative management. From an Ayurvedic perspective, low back pain with radiation to the lower limbs may be clinically correlated with Gridhrasi. This case series describes the clinical outcomes of an individualized integrative approach combining Ayurveda, Yoga and physiotherapy.

Case Presentation: Five patients aged 50–57 years (3 males and 2 females) with chronic or recently aggravated low back pain and radiating lower-limb symptoms were managed as inpatients. Clinical and imaging findings included lumbar disc bulges, foraminal narrowing, anterolisthesis and degenerative changes. Functional ambulation, pain and disability were assessed using the Functional Ambulation Profile (FAP), Visual Analog Scale (VAS) and Oswestry Disability Index (ODI), respectively.

Methods: Patients received individualized integrative management comprising Ayurveda-based therapies, Yoga and physiotherapy. Ayurvedic interventions included Sadyo Virechana, Abhyanga, Swedana, Kati Basti, two courses of Yoga Basti, individualized Niruha and Anuvasana Basti, and Shamana Aushadhis. Shashtika Shali Pinda Sweda and Ksheera Basti were administered when clinically indicated. Individualized Yoga practices and physiotherapy were provided according to pain, mobility and functional status. Treatment duration ranged from 15–22 days.

Results: All five patients demonstrated improvement following treatment. Mean FAP increased from 81.8 to 88.6, while mean VAS pain score decreased from 7.2 to 2.8. Mean ODI decreased from 48.8% to 29.2%. At the individual level, FAP improved in all five patients, while VAS and ODI decreased in all cases. The observed changes indicate improvement in functional ambulation, pain and disability over the treatment period.

Conclusion: This case series suggests that an individualized integrative approach combining Ayurveda, Yoga and physiotherapy may improve pain, functional ambulation and disability in low back pain with radiating symptoms.

OP-80: Repeated short-term functional responses to integrative Ayurveda Yoga and physiotherapy rehabilitation in children with Duchenne muscular dystrophy a case series

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Dr Hemanth Bhargav, Associate professor
Dr. Kishore Kumar Ramakrishna, Professor
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Aims/Objectives: Duchenne muscular dystrophy (DMD) is a progressive neuromuscular disorder characterized by progressive muscle weakness and functional mobility decline. Rehabilitation aims to preserve function. This case series describes functional changes following repeated short-term Ayurveda and physiotherapy-based rehabilitation in children with DMD.

Methods: Five children aged 8–14 years underwent two admissions for a standardized 3-week rehabilitation program Comprising Ayurveda, yoga and Physiotherapy interventions. Same intervention was administered during both admissions. The second admission was planned approximately three months after the first, though actual intervals varied, with children returning after approximately six months. Functional outcomes were assessed before and after each admission using the North Star Ambulatory Assessment (NSAA) and Functional Ambulation Profile (FAP). Data were analysed descriptively, focusing on individual and group-level changes.

Results: During the first admission, mean NSAA score increased from 19.8 ± 2.9 to 21.0 ± 3.5, while mean FAP score increased from 81.8 ± 5.7 to 82.8 ± 7.1. During the second admission, mean NSAA increased from 15.8 ± 3.2 to 16.6 ± 3.9, and mean FAP increased from 78.6 ± 7.0 to 79.2 ± 6.6. During the first admission, NSAA improvement was observed in two of five children and FAP improvement in three of five. During the second admission, NSAA improved in three children and FAP improved in three children. Individual responses were heterogeneous. Scores at the beginning of the second admission were generally lower than those recorded after the first admission, following the longer-than-planned interval between admissions.

Conclusion: Repeated 3-week courses of Ayurveda, yoga and physiotherapy were associated with small short-term functional improvements in several children. However, individual responses varied and gains were not consistently maintained across the interval. These preliminary findings from a small case series support the need for prospective longitudinal studies with standardized follow-up intervals to evaluate repeated integrative rehabilitation in DMD.

OP-81: Public mental health implications integrating Yoga Ayurveda and life-skills interventions for adolescent well-being in rural community

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Dr. Narayana Manjunatha, Additional Professor of Psychiatry, NIMHANS
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Aims/Objectives: To assess the effectiveness of an integrated Yoga, Ayurveda lifestyle, and life-skills intervention in reducing stress and improving self-esteem and lifestyle-related behaviours among school-going adolescents.

Methods: A prospective pre–post interventional study was conducted during 2025–2026 under the NIMHANS–Ashraya Hastha Trust Comprehensive Mental Health Action Program for Rural Communities (Project NAMAN) in Belur Taluka. Students in Grades VIII–IX from 25 schools participated in a two-month intervention that included daily Yoga practice, weekly Ayurveda lifestyle sessions, and life-skills education. Outcomes were assessed using the Adolescent Stress Scale (ADOSS), Rosenberg Self-Esteem Scale (RSES), Brief COPE, Ayurveda Living and Behaviour Evaluation Scale for Adolescents (ALBES), and Number Cancellation Scale. Pre–post changes were analysed using the Wilcoxon signed-rank test.

Results: Among 398 participants (191 males, 48.0%; 207 females, 52.0%), ADOSS scores significantly reduced from 16 (IQR:12–21) to 15 (IQR:11–20) ($Z=-4.429$, $p<.001$). RSES increased from 28 (IQR:26–31) to 29 (IQR:27–33) ($Z=4.029$, $p<.001$), and ALBES improved from 104 (IQR:92–115) to 111 (IQR:100–120) ($Z=5.763$, $p<.001$). COPE scores showed modest improvement.

Conclusion: Preliminary results indicate that an integrated Yoga, Ayurveda lifestyle, and life-skills

intervention helps reduce stress and improve self-esteem and healthy behaviours among rural adolescents. Larger and longer-term studies are needed to assess its potential integration into public mental health programs.

OP-82: Impact of an integrated Yoga and Ayurveda-based lifestyle intervention on cognitive performance psychological well-being perceived stress among pre-university college students

Savita Biradar, NIMHANS

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Dr. Suresh Bada Math, Professor of Forensic Psychiatry at NIMHANS

Aims/Objectives: Primary Objective: To evaluate changes in cognitive performance (TMT) and mental well-being (WHO-5) among Pre-University College (PUC) students following an integrated Yoga and Ayurveda-based lifestyle intervention. Secondary Objective: To evaluate changes in perceived stress (PSS) and Ayurveda-based lifestyle practices among Pre-University College (PUC) students following an integrated Yoga and Ayurveda-based lifestyle intervention.
Methods: This single-group pre–post study included 145 PUC students aged 15–18 years from Belur, Karnataka, and Munsiyari, Uttarakhand. The six-week intervention comprised 36 supervised Yoga sessions (30 minutes each) and weekly Ayurveda education. Overall changes were analysed using linear mixed models; site-specific changes were assessed using paired t-tests or Wilcoxon signed-rank tests, as appropriate.

Results: Results and Comments: Overall, TMT completion time improved significantly, alongside increased Ayurveda lifestyle scores. Changes in PSS and WHO-5 were not statistically significant. Site-specific analyses showed significant improvement in TMT performance and significant change in Ayurveda well-being in Belur. In Munsiyari, significant changes occurred in perceived stress and WHO-5 well-being, but not in TMT or Ayurveda well-being. These patterns

varied by site and should not be interpreted as evidence of differential effectiveness without direct statistical comparison.

Conclusion: The programme was associated with improved cognitive task performance and Ayurveda lifestyle practices overall, with differing site-specific findings. Controlled studies are needed to clarify effectiveness and longer-term outcomes.

OP-83: Impact of postoperative pranayama on quality of life among geriatric patients following hip fracture surgery a prospective interventional study

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Aims/Objectives: To evaluate the effects of a six-month Pranayama intervention on total, physical, psychological, social, and environmental scores compared with standard care in geriatric patients following hip fracture surgery.

Methods: This comparative study included 45 geriatric patients, with 22 in Group A (Pranayama intervention) and 23 in Group B (control receiving standard care). Outcomes were assessed at baseline and after six months. Paired-samples t-tests evaluated within-group changes, while Welch's independent-samples t-tests compared changes between groups. Statistical significance was set at $p < 0.05$.

Results: The two groups were comparable in age and gender at baseline. Group A demonstrated statistically significant improvements in total quality-of-life scores and all four WHOQOL-BREF domains—physical, psychological, social, and environmental—after six months of the Pranayama intervention ($p < 0.05$). Additionally, patients in the Pranayama group showed reductions in symptoms of depression, anxiety, and stress compared with the control group receiving standard care.

Conclusion: ix months of Pranayama intervention was associated with significant improvements in the assessed outcome scores among geriatric patients following hip fracture surgery. Further controlled studies with larger samples are warranted to confirm these findings and determine the clinical effectiveness of Pranayama.

OP-84: Yoga and pranayama for anxiety and stress regulation a narrative review linking Ayurvedic concepts of manas and triguna with modern psychological findings

Manjunatha S,
Mr. Ambarish JRK, Student

Aims/Objectives: Narrative review synthesized clinical, neurophysiological and trait-based empirical evidence evaluating yoga-based practices and Ayurvedic psychological models for stress and anxiety mitigation.

Methods: Electronic databases (PubMed, PubMed Central, Google Scholar) were systematically searched for randomized controlled trials, systematic reviews and meta-analysis examining yoga practices, specialized respiratory protocols (Bhastrika, Bhrahmari, alternate nostril), Yoga Nidra, Ashwagandha and Triguna psychological constructs. Thirty key publications were synthesized qualitatively.

Results: Empirical evidence demonstrates small-to-moderate short-term reductions in subjective stress and state/trait anxiety among non-clinical cohorts, though therapeutic efficacy across DSM-diagnosed anxiety disorders remain heterogeneous. Voluntary slow breathing practices reliably enhance vagally mediated heart rate variability (HRV), offering a plausible neuroviscelar mechanism for down-regulating sympathetic hyperarousal and bolstering emotional regulation. Yoga Nidra displays high potential for symptom alleviation in emerging pooled meta-analysis. Herbal adaptogens (Withania somnifera/ Ashwagandha) Consistently attenuated perceived stress and serum cortisol levels. Furthermore, empirical trials on structured meditation shifts in underlying behavioural dispositions, significantly elevating adaptive Sattvic personality dimensions while suppressing maladaptive Rajasic (agitation) and Tamasic (inertia) tendencies.

Conclusion: Postural yoga, targeted pranayam and Yoga Nidra serve as effective non-pharmalogical adjuncts for non-clinical stress and anxiety management, supported by parasympathetic autonomic regulation. Ayurvedic therapeutics and Triguna-based psychometric assessments offer valuable framework exetensions for personality psychology, though future randomized trials must integrate physiological biomarker telemetry with longitudinal dispositional profiling

OP-85: Mental resilience menstrual rhythm sattvasara profiling across oligomenorrhea and hypomenorrhea phenotypes

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Aim: To assess Sattvasara, an Ayurvedic Manas-related constitutional attribute, in women with Artavakshaya and examine its relevance to the psychophysiological dimensions of menstrual health. Objectives: 1. To describe Sattvasara scores in women with Artavakshaya. 2. To compare scores across oligomenorrhea, hypomenorrhea, and combined phenotypes.

Methods: This descriptive observational study enrolled 96 women aged 16-40 years diagnosed with Artavakshaya and classified them by clinical presentation: oligomenorrhea (n=57), hypomenorrhea (n=15), and combined (n=24). Sattvasara was assessed by the investigator through structured clinical examination using a standardized Ayurvedic assessment tool, and scores were recorded manually on a predesigned proforma. Data were analysed in SPSS using descriptive statistics with 95% confidence intervals, Spearman's correlation, and Pearson chi-square (α=0.05).

: Results: The overall mean score was 9.11 ± 2.12. Oligomenorrhea had the lowest mean (8.95 ± 2.22; 95% CI 8.36-9.54; median 9), compared with hypomenorrhea (9.40 ± 2.06; 8.26-10.54; median 10) and the combined group (9.33 ± 1.95; 8.51-10.16; median 10). One low outlier (score 2) occurred in oligomenorrhea. Confidence intervals overlapped across groups. Spearman's correlation was very weak and non-significant (ρ=0.078, p=0.449). Chi-square was non-significant (χ^2=14.223, df=16, p=0.582) but of limited reliability, as 74.1% of cells had expected counts below 5.

Conclusion: Sattvasara was lowest in oligomenorrhea, but no statistically significant association with Artavakshaya phenotype was found. Contemporary literature suggests psychological stress may influence reproductive function through hypothalamic-pituitary-adrenal and hypothalamic-pituitary-ovarian axis interactions; however, this evidence cannot establish a direct equivalence with Sattvasara. The findings are therefore hypothesis-generating. Larger studies pairing Sattvasara with validated psychometric scales and reproductive-endocrine parameters are warranted.

OP-86: Yoga and pranayama for anxiety and stress regulation a narrative review linking Ayurvedic concepts of manas and triguna with modern psychological findings

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PES University

Aims/Objectives: Narrative review synthesized clinical, neurophysiological, and trait-based empirical evidence evaluating yoga-based practices and Ayurvedic psychological models for stress and anxiety mitigation.

Methods: Electronic databases(PubMed, PubMed Central, Google Scholar)were systematically searched for randomized controlled trials, systematic reviews, and meta-analyses examining yoga practices, specialized respiratory protocols (Bhastrika, Bhramari, alternate nostril), Yoga Nidra, Ashwagandha, and Triguna psychological constructs. Thirty key publications were synthesized qualitatively.

Results: Empirical evidence demonstrates small-to-moderate short-term reductions in subjective stress and state/trait anxiety among non-clinical cohorts, though therapeutic efficacy across DSM-diagnosed anxiety disorders remains heterogeneous. Voluntary slow breathing practices reliably enhance vagally mediated heart rate variability (HRV), offering a plausible neurovisceral mechanism for down-regulating sympathetic hyperarousal and bolstering emotional regulation. Yoga Nidra displays high potential for symptom alleviation in emerging pooled meta-analyses. Herbal adaptogens (Withania somnifera / Ashwagandha) consistently attenuated perceived stress and serum cortisol levels. Furthermore, empirical trials on structured meditation interventions yielded measurable shifts in underlying behavioral dispositions, significantly elevating adaptive Sattvic personality dimensions while suppressing maladaptive Rajasic (agitation) and Tamasic (inertia) tendencies.

Conclusion: Postural yoga, targeted pranayama, and Yoga Nidra serve as effective non-pharmacological adjuncts for non-clinical stress and anxiety management, supported by parasympathetic autonomic regulation. Ayurvedic therapeutics and Triguna-based psychometric assessments offer valuable framework extensions for personality psychology, though future randomized trials must integrate physiological biomarker telemetry with longitudinal dispositional profiling.

OP-87: Changes in negative symptoms following virechana in patients with schizophrenia a retrospective case series

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Aims/Objectives: To describe changes in negative symptom severity following Virechana Karma in patients with schizophrenia receiving concomitant antipsychotic treatment.

Methods: Negative symptoms of schizophrenia, including reduced motivation, diminished emotional expression, and social withdrawal, contribute to functional impairment. Shodhana therapy may have a potential adjunctive role in integrative management. This case series describes changes in the severity of negative symptoms following Virechana Karma. Five patients diagnosed with schizophrenia by a psychiatrist according to ICD-11 criteria were managed in the Inpatient Ward of the Department of Integrative Medicine, NIMHANS, Bengaluru. Negative symptoms were assessed before and after intervention using the Scale for the Assessment of Negative Symptoms (SANS). All patients underwent Virechana Karma following Snehapana and Swedana. Antipsychotic medications were continued throughout the treatment period. Pre- and post-intervention SANS scores were compared using the exact Wilcoxon signed-rank test.

Results: The mean SANS score decreased from 29.20 ± 3.35 at baseline to 21.40 ± 3.85 after intervention, representing a mean reduction of 7.80 ± 2.95 points. All five patients demonstrated reductions in SANS scores, ranging from 4 to 12 points. These preliminary findings indicate a potential improvement in negative symptoms following virechana. Long-term follow-up is warranted to assess the sustainability of these changes, as the effects of virechana may extend beyond the immediate post-intervention period.

Conclusion: This case series observed reductions in negative symptom scores following Virechana Karma administered to patients receiving antipsychotic treatment.The findings provide preliminary clinical observations warranting further investigation. However, the small sample size, absence of a control group, and concomitant antipsychotic treatment limit causal interpretation. Prospective controlled studies with larger samples and longer follow-up are warranted to evaluate the potential adjunctive role of virechana therapy in schizophrenia.

OP-88: The unheard dimensions of healing exploring mantra chikitsa as an integrative approach to mental health

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Aims/Objectives: More than a billion people worldwide, roughly 1 in 7, live with a mental disorder, which has increased interest in integrative approaches to mental healthcare. This review looks at the classical basis of Mantra Chikitsa, the therapeutic use of sacred sound and chanting in Ayurveda, a less explored dimension of mental healthcare. It also considers its possible role, alongside conventional care, in managing stress, anxiety and emotional disturbances, and in supporting psychological well-being.

Methods: A narrative review was carried out. Classical Ayurveda texts, mainly the Charaka Samhita, where mantra is described under Daivavyapashraya Chikitsa, were studied for references to Mantra Chikitsa. Scientific literature on mantra recitation, chanting and related sound-based practices was searched in PubMed and Google Scholar and examined for psychological and physiological effects.

Results: Classical texts give importance to mental balance and describe approaches meant to support psychological well-being. The studies suggest that mantra recitation and chanting may lower perceived stress and anxiety, encourage relaxation and help with emotional regulation. These effects may be linked to focused attention, slow rhythmic breathing and changes in stress-related physiological responses. However, studies differ widely in design, intervention methods and outcome measures, so firm conclusions cannot be drawn. Research that looks specifically at Mantra Chikitsa as described in classical Ayurveda remains insufficient.

Conclusion: Mantra Chikitsa is a promising avenue for bringing Ayurveda knowledge into present-day mental healthcare as an integrative approach, especially where accessible and holistic support is needed. Well-designed clinical studies are required to establish its effectiveness, safety and proper place alongside standard mental health treatments.

OP-89: Beyond psychotherapy theatre-based emotional regulation- an integrative perspective from neuroplasticity Yoga and Ayurveda

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Aims/Objectives: To critically synthesize evidence on theatre-based interventions for emotional regulation and psychological well-being and explore their connections with neuroplasticity, Rasa theory, yoga, and Ayurveda.

Methods: This review will systematically examine published literature on theatre-based interventions and emotional regulation. PubMed/MEDLINE, Scopus, Web of Science, PsycINFO, and the Cochrane Library will be searched from inception to October 2026. Eligible studies will include human research investigating theatre, drama therapy, psychodrama, or structured acting interventions with relevant emotional or psychological outcomes. Relevant neurobiological studies, yoga research, rasa theory of Natyashastra and Ayurvedic literature will be synthesized separately as complementary evidence. Two stage screening, structured data extraction, design-appropriate risk-of-bias assessment, and narrative synthesis will be undertaken in accordance with PRISMA 2020 guidance.

Results: Previously published systematic reviews suggest that theatre-based interventions may improve selected mental health outcomes, although limitations in study quality affect the certainty of evidence. Neuroscientific research offers preliminary insights into brain-network changes associated with acting experience, while yoga literature provides additional evidence concerning psychological well-being and brain function, while Rasa theory offers conceptual framework for exploring emotion, empathy and emotional awareness. Ayurvedic concepts, particularly Satvavajaya, offer a traditional framework for interpreting psychological health. Direct evidence establishing an integrated theatre-yoga- Ayurveda approach remains insufficiently established.

Conclusion: This review will evaluate evidence on theatre-based emotional regulation and explore connections with neuroplasticity, yoga, Rasa theory and Ayurveda. Findings may guide future interdisciplinary research and the development of testable integrative approaches to psychological well-being.

OP-90: A cross-comparison between diet as an Ayurvedic etiology of psychiatric disorders and the gut microbiota kynurenine pathway

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Aims/Objectives: To evaluate the biological plausibility of dietary causes of mental illness described in Charaka's Unmada Nidana in light of current evidence on gut microbiota and kynurenine metabolism, and to develop a nutritional psychiatry framework using Ashta Ahara Vidhi Vishesha Ayatana Objectives: (1) To classify the dietary causes of unmada and comprehensively evaluate the evidence associated with each factor (2) To identify the role of Ashta Ahara Vidhi Vishesha Ayatana in nutritional psychiatry.

Methods: A cross-comparative narrative review was carried out, with the dietary clauses of Nidana Sthana 7/4 and Chakrapani's commentary and Ashta Ahara Vidhi Vishesha Ayatana from vimana sthana of Charka samhita . Searches were conducted on PubMed,Google scholar and DHARA using Boolean operators (AND, OR) for diet, gut microbiota, kynurenine metabolites and psychiatric outcomes.

Results: The diet influences the gut microbiota by shaping its composition. The gut affects the metabolism of tryptophan and kynurenine. The metabolism pathway leads to diseases because the products of kynurenine have opposing effects on the nervous system and the balance of these products varies among different disorders. These observations align with Charaka's ahara nidana that leads to dosha imbalance and obstruction of mental channels causing Unmada. Direct human evidence exists for kala, upayogasamstha, and karana, while mechanistic evidence supports the roles of prakriti, samyoga, rasi, desa, and upayokta. Conclusion: Charaka's dietary etiology of unmada aligns with current evidence in three respects: diet and stress as causal factors, gut microbiota and kynurenine metabolism as mediators, and diet as a modifiable intervention. Grouping diet by the eight factors of food use offers a framework for nutritional psychiatry, pairing each factor with a measurable marker such as the kynurenic-to-quinolinic acid ratio and prioritising research by evidence strength.

OP-91: Neonatal convulsions with persistent clinical concerns after seizure control a case report on the clinical course following integrative Ayurvedic intervention

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Aims/Objectives: To describe the clinical course and follow-up outcomes of a neonate with convulsions who received integrative Ayurvedic intervention following seizure control but persistent clinical concerns.

Methods: A male neonate, aged five days at admission, presented with convulsions and received conventional hospital management, including oxygen support, antiepileptic medication, antibiotics, and intravenous fluids. Although seizures reportedly came under control, satisfactory clinical improvement was lacking. Ayurvedic intervention was initiated when the infant was 11 days old. Swarnaprashana was administered to the infant, while Hemagarbha Pottali and other Ayurvedic medicines were administered to the mother. The clinical course was monitored, and subsequent developmental progress was documented during follow-up.

Results: Progressive clinical improvement was noted following initiation of the Ayurvedic intervention. On Day 1 after intervention, the previously lethargic infant began crying spontaneously for feeds in the early morning and became more active later that day. Continued improvement was reported on Day 2, followed by improved spontaneous movements of the upper and lower limbs on Day 3. Respiratory support was progressively weaned and discontinued on Day 5. The infant was transferred from the ICU to maternal care on Day 6 and discharged home on the seventh day after intervention. Subsequent follow-up showed age-appropriate developmental progress, with milestones reported periodically. An EEG performed three months after intervention was reported as normal, without interictal epileptiform discharges.

Conclusion: This case offers a hopeful clinical observation regarding the potential role of Ayurveda as part of integrative care in neonatal neurological conditions. The reported improvement encourages further exploration of Ayurvedic approaches as potential supportive interventions. However, causality cannot be established from a single case. Systematic clinical studies, objective neurological and developmental assessments, and rigorous safety monitoring are essential to determine the role and safety of such interventions.

OP-92: Integrative neuroscience biomarker-guided methodologies multiscale evidence and translational research frameworks

Aishwarya B, *Sri Kalabyraveshwara Swamy Ayurvedic Medical College,Hospital And Research Centre*

Aims/Objectives: Integrative Evidence from Basic Science Research: Mechanisms, Biomarkers, Genomics and Integrative Neuroscience

Background: Panchakarma, Ayurveda and Yoga are increasingly being explored through modern scientific research to understand their possible effects on biological mechanisms, biomarkers and brain function. However, the available evidence is scattered across different fields, and important research gaps remain.

Objective: To bring together existing research on Ayurveda, Panchakarma and Yoga and explore how evidence from basic science, molecular biology, genomics, biomarkers and neuroscience can be integrated into a common scientific framework.

Methods: This work brings together findings from multiple published studies, reviews and research approaches across relevant scientific disciplines. It attempts a structured, evidence-based synthesis by examining the strength, consistency and limitations of the available findings. Although a systematic approach is intended, gaps in the available literature and incomplete evidence in some areas limit the conclusions that can be drawn.
Results: Existing research suggests potential links between Yoga and changes in inflammation-related gene expression, stress physiology and pathways associated with neuroplasticity. Studies of Panchakarma-based interventions have reported changes in selected metabolic biomarkers, while preliminary research on procedures such as Shirodhara suggests possible effects on autonomic function and brain electrical activity. These findings provide starting points for investigating interactions between neural, endocrine, immune and metabolic systems. However, evidence linking specific Panchakarma procedures to defined molecular, genomic and neurological mechanisms remains limited.

Conclusion:
This synthesis highlights the potential of integrating traditional interventions with modern basic science and neuroscience to develop testable hypotheses about their mechanisms and clinical effects. It also identifies important gaps in biomarker validation, genomic research, mechanistic understanding and high- quality clinical evidence. Further research using standardised interventions, well-designed controlled studies and integrated molecular and neurophysiological measurements is needed to establish reliable mechanisms and determine

clinical relevance.

Keywords: Ayurveda; Panchakarma; Yoga; basic science; biomarkers; genomics; mechanisms; integrative neuroscience.

OP-93: Utility of a validated Yoga program in Hirayama disease: a nine-month follow-up matched-controlled study

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Background: Hirayama disease is a rare, self-limiting cervical flexion-induced myelopathy causing progressive distal upper-limb weakness and atrophy, predominantly in young Asian males. Current management (cervical collar or surgery) only halts progression and does not restore lost strength. No rehabilitative adjuvant has been evaluated. Objectives: To assess the effect of a validated tele-yoga programme on bilateral hand-grip strength (primary) and on pinch strength, upper-limb dexterity, and need for surgery (secondary) over nine months, compared with an active exercise control. Methods: Single-centre, open-label, matched-controlled trial (N = 140; 70 per arm). Participants with progressive Hirayama disease (age 16–45 years) received either a validated tele-yoga module (cervical extension, deep-neck stabilisation, extremity practices, pranayama, relaxation; 5 × 60 min live Zoom sessions/week) plus standard care, or an active control of hand-strengthening and neck-extension exercises plus standard care. Primary analysis was intention-to-treat linear mixed-effects modelling (Group × Time interaction) with random intercepts; secondary binary outcomes used Fisher exact tests, odds/risk ratios and grouped-time survival analysis. Results: Retention at 9 months was 80 %. Tele-yoga produced significantly greater gains in right-hand grip (+2.24 kg, 95 % CI 1.06–3.43, $p < 0.001$, $d = 0.21$) and left-hand grip (+1.87 kg, 95 % CI 0.75–2.98, $p = 0.001$, $d = 0.17$) versus control. Five of six pinch-strength measures, left MRC sum score, bilateral self-rated weakness, and neck-pain prevalence also favoured tele-yoga. Dexterity and physical activity improved similarly in both arms. Surgery occurred in 10.5 % of tele-yoga versus 24.5 % of control participants with known status. Grip gains correlated strongly with sessions attended (Spearman $\rho = 0.78$, $p < 0.001$). Transient neck pain was self-limiting and comparable between arms. Conclusions: Nine months of add-on tele-yoga yielded statistically significant, clinically meaningful improvements in hand-grip and pinch strength and a promising reduction in surgical need compared with active exercise control in progressive Hirayama disease. A multi-centre trial with blinded assessors, dynamic MRI/EMG and recorded surgery dates is warranted.

OP-94: Neural, psychological, and physiological correlates of long-term Vedic chanting: a study protocol

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Bharath Holla (Guide),
Shantala Hegde (Co-guide).
NIMHANS

Background: Vedic chanting is a traditional contemplative practice that demands precise articulation, even pacing, uninterrupted continuity, and breath-coupled rhythm. Despite its rigor, it remains largely unexamined in neuroscience. Intrinsic neural timescales (INTs), which index how long neural activity remains autocorrelated with its own past, offer a biologically grounded measure of temporal integration and have shown stability across tasks in advanced meditators. No study has examined INTs in Vedic chanting.

Objective: To investigate neural, physiological, and psychological correlates of long-term Vedic chanting by comparing experienced chanters with chanting-naïve controls. Methods: This cross-sectional, case-control study will recruit 84 adults aged 20–50 years (42 chanters with ≥5 years of daily practice; 42 matched controls). Participants will undergo EEG recording during an auditory oddball task (external attention), mental chanting of the Śrī Rudram (controls listen to the same audio), and breath-watching(internal attention). Heart rate variability(HRV) and respiration will be recorded during overt chanting (controls: quiet breathing). Trait and state measures will be measured using psychological questionnaires. The primary outcome is the EEG autocorrelation window (ACW-50), analysed using linear mixed-effects models for Group × Condition interactions. Secondary outcomes include RMSSD, high-frequency HRV power, EEG spectral and P300 features, and brain–heart–experience correlations, with years of practice modelled as a continuous variable.

Expected outcomes: Chanters are expected to show smaller task-related INT variability, higher vagal HRV indices, and associations between INT stability, non-dual awareness, and self-regulation. Implications: This study will identify candidate biomarkers of contemplative expertise, supporting culturally grounded, evidence-based approaches in integrative mental health research. Conflicts of Interest: The authors declare no potential conflicts of interest.

OP-95: Neuroimaging, cognitive & autonomic profiling based on constitutional phenotypes in multiple sclerosis: a cross sectional analysis

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Introduction: Multiple sclerosis (MS) is an inflammatory demyelinating disease of the central nervous system associated with heterogeneous clinical manifestations including, cognitive impairment, and autonomic dysfunction. Heart rate variability (HRV) provides a non-invasive measure of autonomic function, while neuroimaging and cognitive assessment help characterize disease-related changes. Ayurvedic constitutional phenotypes (Prakriti) may offer an additional framework for exploring differences in cognitive and autonomic profiles. This study explores the relationship among Prakriti, HRV, cognitive performance (MoCA), and neuroimaging findings in individuals with MS and healthy controls.

Methods: Individuals diagnosed with Multiple Sclerosis between the age group of 18-55 years with Expanded Disability Status Scale (EDSS) <5 age and gender-matched healthy controls (HC) were recruited from the neurology OPD setting at NIMHANS.

Results: A total of 70 (35 in each group, M:F-28:42) patients of MS (Mean age ± SD: 33.1 ± 9.8 years) and HC (32.9 ± 9.7) were recruited, Compared with healthy controls participants with multiple sclerosis (MS) had lower Montreal Cognitive Assessment (MoCA) scores ($p = 0.011$) and higher LF/HF ratios ($p = 0.016$) and Vata scores ($p = 0.018$). In the full cohort, MoCA scores were negatively associated with age ($\beta = -0.157$, $p < 0.001$), and LF/HF ratio ($\beta = -0.472$, $p = 0.018$). Exploratory region-wise analyses identified the strongest associations between HRV indices and the right middle cingulate and left lingual gyri (Spearman $\rho = 0.50–0.64$, $p \leq 0.011$). Within the MS subgroup, age is negatively associated with MoCA scores ($\beta = -0.107$, $p = 0.030$), whereas temporal and frontal white matter lesion volumes showed non-significant trends ($p = 0.051$ and $p = 0.069$, respectively). Total lesion volume was not significantly correlated with MoCA scores (ρ =

−0.18, p = 0.341). Lesion burden was greatest in temporal, frontal, and parietal white matter, with additional involvement of periventricular regions. Conclusion: MS is associated with lower MoCA scores, higher LF/HF and Vata scores, and lower Kapha scores. Age is the strongest correlate of cognition, while global lesion burden was not significantly associated with MoCA. Regional HRV–brain associations suggest potential targets for further investigation. These preliminary findings warrant validation in larger cohorts.

Poster presentations

PP-01: Ayurvedic management and recent therapeutic advances in attention-deficithyperactivity disorder ADHD - a review

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Dr. Ashutosh Kumar Yadav, Associate Professor, Rachana Sharir, All India Institute of Ayurveda
Dr. Sumeet Goel, Associate Professor, Pediatrics, All India Institute of Ayurveda

Aims/Objectives: To explore the Ayurvedic understanding of ADHD and review the therapeutic approaches that have been studied for improving attention, behaviour and cognitive functions in children with ADHD.

Methods: Published literature on Ayurvedic management of ADHD was reviewed, along with relevant classical Ayurvedic concepts. Evidence relating to Medhya Rasayana, Brahmi Ghrita, Shirodhara, Panchakarma, dietary and lifestyle measures, and Yoga-based interventions was examined, with particular attention to reported effects on attention, hyperactivity, impulsivity and cognitive functions.

Results: Available studies suggest that Ayurvedic interventions may have a beneficial role in addressing some of the core difficulties associated with ADHD, particularly problems related to attention and behavioural regulation. Studies involving Brahmi Ghrita, Medhya Rasayana and Shirodhara have reported encouraging findings, while Yoga and lifestyle-based approaches may provide additional support. However, differences in treatment protocols, small sample sizes and limited high-quality clinical trials make it difficult to draw firm conclusions.

Conclusion: Ayurveda offers a holistic and individualized approach that may serve as a complementary component of ADHD management. Further well-designed clinical studies using standardized interventions and validated ADHD assessment tools are needed to establish its effectiveness and supportmeaningful integration with contemporary care.

PP-02: Multimodal Ayurvedic management of attention deficit hyperactivity disorder a case report

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GJPIASR

Background: Attention deficit hyperactivity disorder (ADHD) is commonly associated with difficulty in sustaining attention, poor concentration, and hyperactive behaviour. From an Ayurvedic perspective, these features can be understood in the context of Manovaha Srotodushti. Based on this understanding, a

combination of Medhya rasayana and Vata-shamaka therapies was considered for the present case.

Aim: To observe the clinical response to a multimodal Ayurvedic approach with difficulties in attention, behavioral, hyperactivity, and cognitive functioning associated with ADHD.
Methods: A 5-year-old male was brought with complaints of poor concentration, difficulty sustaining attention, marked hyperactivity, disturbed sleep, and increased appetite. On Ayurvedic assessment, Vata-Kapha predominance was observed. After considering other possible conditions, was assessed as having ADHD. Cognitive assessment using the Seguin Form Board Test showed an IQ score of 30. The child was treated with Shirodhara and matravasti (retention enema) for 10 days. Oral medications were included along with Pratimarsha Nasya (nasal instillation).

Results: After the treatment, the child showed noticeable improvement in attention and concentration, with better behavioral control and reduced hyperactivity. Sleep quality also improved, and an overall positive change was observed in the child\'s day-to-day functioning and interaction

Conclusion: This case illustrates the potential of a multimodal Ayurvedic approach incorporating Medhya Rasayana (Rejuvenation) and Vata-shamaka therapies in addressing the behavioral and cognitive manifestations of ADHD. The observations are encouraging, but longer follow-up and clinical studies are needed.

PP-03: Yoga Intervention for Behavioural and Adaptive Skill Development in Intellectual Disability

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Background:
Intellectual disability (ID) severely limits cognitive functioning and adaptive behaviour, accounting for 10.8% of the global mental disorder burden. Integrative therapies combining asanas, pranayama, and yoga nidra show potential in fostering emotional regulation, motor coordination, and cognitive capacity (Dhi, Dhriti, Smriti) in neurodevelopmental conditions

Objective:
To evaluate the efficacy of an 8-week structured Yoga Module on adaptive skills and problem behaviours in adults with ID using the Behavioural Assessment Scales for Indian Children with Mental Retardation (BASIC-MR).

Methods:
An open-label clinical trial was conducted at a special education workshop in Nagpur with 37

adults with ID (aged 18–35 years, disability 50%–80%) [7] . Participants completed a daily 60–70 minute Yoga Module (warm-ups, postures, breathing control, deep relaxation, and ice-breaking activities) 6 days per week for 8 weeks. BASIC-MR Part A (skills) and Part B (undesirable behaviours) were evaluated at baseline, Day 30, and Day 60, and analysed using the Wilcoxon signed-rank test

Results:

Total BASIC-MR Part A scores improved significantly from 27.32 ± 10.72 at baseline to 35.86 ± 11.57 on Day 60 (p < 0.001; 41.10% overall improvement) [14] . Significant gains were observed across Motor skills (9.02 ± 3.39 to 10.48 ± 3.73, p < 0.001) [14][17] , Activities of Daily Living (11.37 ± 3.98 to 12.92 ± 5.04, p < 0.001) [14][17] , and Reading-Writing capabilities (7.94 ± 5.47 to 9.24 ± 7.21, p = 0.029) [14][17] . BASIC-MR Part B violent destructive scores decreased by 22.98% (2.08 ± 1.94 to 1.64 ± 1.78, p < 0.001).

Conclusion:

An 8-week structured Yoga Module significantly enhances functional independence and adaptive capabilities while reducing problematic behaviours in adults with ID, supporting its integration into psychiatric rehabilitation and integrative neuroscience frameworks

Keywords:

Intellectual Disability; Yoga Module; BASIC-MR Scale; Integrative Rehabilitation; Adaptive Behaviour; Clinical Tria

PP-04: Human adaptome health assessment and mind-body care experience from two clinics and a medical college integrative medicine department

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Dr. Leena Phadke, Prof. & Head, Integrative Medicine, SKN Medical College

Dr. Tanvi Mahajan, PhD. Lifesciences & MBM Practitioner

Dr. Sanjay Phadke, Senior Neuropsychiatrist

Aims/Objectives: To evaluate the scientific merit and clinical utility of this health assessment tool across diverse clinical settings.

Methods: De-identified health assessment data were collected during routine clinical evaluations across three sites: two private psychiatry clinics (Pune and Jammu) and an Integrative Medicine Department at a medical college hospital (Pune).

Results: The final dataset comprised 623 health assessments. The private clinic cohort included 144 patients (45.3% male, 54.7% female; median age: 41 years), while the integrative medicine cohort included 479 patients (31.5% male, 68.3% female; median age: 39 years). Factor analysis revealed a single dominant \General Health\" core factor explaining 44% of the total variance. In the

private clinic dataset,Vitality was the most frequently impaired domain (73.6%),followed by Euthymia (61.8%) and Engagement (52.1%). Sleep quality demonstrated strong correlations with Euthymia (ρ≈0.60),Vitality (ρ≈0.40),and Hope (ρ≈0.52),highlighting a prominent physiological–affective interface. In the medical college dataset,across diverse diagnoses,Sleep (68.9%) and Vitality (64.7%) impairments were most prevalent,and also a cognitive–affective relationship."

Conclusion: The presence of a single, dominant \General Health\" factor indicates that seemingly isolated chronic conditions share a systemic,foundational origin. These findings validate the clinical utility of the Human Adaptome Health Assessment and strongly support broad-spectrum,transdiagnostic mind-body interventions aimed at lifting overall systemic health rather than managing isolated diseases."

PP-05: Epigenetics and pediatric neuropsychology

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Aims/Objectives: Childhood is a critical period of rapid brain development and heightened neuroplasticity, during which cognitive, emotional, behavioural, and social capacities progressively emerge. Neurodevelopment is shaped by complex interactions between genetic predisposition and environmental experiences. The increasing prevalence and recognition of neurodevelopmental conditions such as autism spectrum disorder and attention-deficit hyperactivity disorder in the contemporary digital era highlight the need to investigate emerging environmental influences on child development. Epigenetic mechanisms may provide a biological link between environmental experiences and alterations in gene expression without changes in DNA sequence.This study aims to explore an integrated framework examining the potential relationship between neuroplasticity, genetic–environmental interactions, epigenetic mechanisms, emerging digital era exposures, and pediatric mental health, while evaluating the potential role of early multidisciplinary interventions.

Methods: A conceptual integrative framework was developed incorporating occupational therapy, speech and language therapy, music therapy, selected Ayurvedic principles, yoga, lifestyle modification, and other practices from pre conceptional stage to early developmental stages. Changes can be assessed with ISAA scoring.

Results: The framework proposes that environmental, behavioural, and psychosocial influences during critical developmental windows

may interact with neuroplasticity and epigenetic regulation, potentially affecting cognition, behaviour, emotional regulation, and neurodevelopment. The increasing prevalence and recognition of ASD, ADHD, and related conditions warrant investigation of contemporary environmental factors, including intensive AI-associated lifestyles.

Conclusion: An integrated neuroplasticity–epigenetic framework may provide a novel perspective for pediatric mental health promotion. Early, evidence-based multidisciplinary interventions and healthy developmental environments warrant longitudinal and mechanistic research to determine their potential influence on neuropsychological development and lifelong mental health.

PP-06: Effect of mind imagery relaxation technique MIRT on emotion regulation mindfulness and heart rate variability in college students a randomised pilot study

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Dr. Gnanakaaviya, Intern
Dr. Annamalai, Medical officer
JSS Institute Of Naturopathy And Yogic Sciences

Aims/Objectives: To assess the feasibility and preliminary effect of a 7-day MIRT intervention on emotion regulation, mindfulness, and heart rate variability (HRV) among college students, compared to quiet supine relaxation.

Methods: A two-arm, parallel-group randomized pilot study will be conducted among college students aged 18–25 years without regular meditation practice or psychiatric or cardiac conditions likely to influence HRV. Twenty participants will be randomly allocated equally to MIRT or quiet supine relaxation. The MIRT group will receive supervised 20-minute sessions daily for 7 consecutive days, while the comparator group will undergo quiet supine relaxation for the same duration and frequency. Assessments will be performed at baseline and immediately after the intervention. Emotion regulation will be assessed using the Difficulties in Emotion Regulation Scale (DERS) as the primary outcome, while mindfulness and autonomic function will be assessed using the Mindful Attention Awareness Scale (MAAS) and HRV indices (Time and Frequency domains), respectively. Feasibility outcomes will include recruitment, retention, adherence, session completion, and adverse events. Between-group differences will be assessed using baseline-adjusted analyses, with effect sizes and 95% confidence intervals reported to inform future trial design.

Results: As a pilot study, results will focus on feasibility (recruitment, retention, and adherence rates) and preliminary outcome trends. It is anticipated that the MIRT group may show greater reductions in DERS scores, improved MAAS

scores, and favourable HRV changes compared to the control group, though findings will be exploratory given the small sample size.

Conclusion: The study is expected to establish whether a 7-day MIRT protocol is feasible and acceptable for college students, and whether preliminary trends support its potential benefit for emotion regulation, mindfulness, and autonomic function. Findings will inform the design, sample size, and refinement of a future adequately powered randomized controlled trial.

PP-07: Integrated Ayurvedic and conventional management of attention-deficit hyperactivity disorder a case report

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Aims/Objectives: To evaluate the clinical outcome of an integrated treatment approach combining conventional management with Ayurvedic intervention in a child diagnosed with Attention Deficit Hyperactivity Disorder (ADHD).

Methods: A 4½-year-old male child presented with excessive hyperactivity, inability to remain seated, poor response to parental instructions, stubborn behaviour, inattention, and impulsivity. The child was receiving ongoing conventional pharmacological treatment. Baseline symptom severity was assessed using the Conners Parent Rating Scale (CPRS), with a score of 68. Ayurvedic Shamana Aushadhi was administered as an adjunct to the ongoing conventional treatment. Clinical symptoms were monitored, and the CPRS was repeated following the intervention. Results: Following the integrated treatment approach improvement was observed in hyperactivity, attention, impulsivity, sitting tolerance, and compliance with parental instructions. The CPRS score decreased from 68 at baseline to 52 following intervention, indicating a reduction in the severity of reported behavioural symptoms.

Conclusion: This case highlights the potential of an integrative medicine approach in the management of ADHD symptoms in a preschool child. Further prospective controlled studies are warranted to evaluate the efficacy and safety of Ayurvedic interventions as adjuncts to standard ADHD management.

PP-08: Effects of yogic interventions on problematic short form videos use among young adult a narrative review

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Dr. S Ragulprince, MEDICAL OFFICER
JSS Institute Of Naturopathy And Yogic Sciences

Aims/Objectives: To comprehensively evaluate the existing evidence on the role of yoga in managing the problematic short form video use among young adults and to explore their possible effects on executive function, attention span, reward pathway and emotional regulation.

Methods: A narrative review of published literature was conducted to assess the potential role of yoga in managing executive function, attention span, reward pathway and emotional regulation associated with problematic short-form video use. Relevant literature was searched using electronic databases including PubMed, and Google Scholar. Results: The reviewed literature indicates that increased short-form video consumption may be associated with difficulties in self-regulation, impaired attention, stress, altered reward pathway and emotional dysregulation. Existing evidence suggest that yoga may contribute to stress reduction, emotional regulation, executive function and psychological well-being. Although direct evidence specifically examining yoga for short-form video use remains limited.

Conclusion: The yogic interventions may represented potential useful approach to mitigating the problematic short-form video use and its associated symptoms among young adults.

PP-09: Hypertension management through panchakosha an integrative evidence review

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Aims/Objectives: To understand the scientific evidence supporting each layer of the panchakosha- Annamaya, Pranamaya, Manomaya, Vijnanamaya and Anandamaya in relation to hypertension and to propose an integrated, multi-layered approach to Hypertension management with respect to each Kosha and lifestyle-based interventions.

Methods: Classical ayurvedic literature was viewed for panchakosha theory. Scientific literature was viewed from PubMed, Google Scholar and AYUSH research databases for studies of hypertension and it's relation with diet and pranayama. Evidence can be categorized under Basic Science, Clinical Research and Public Health domains corresponding to each kosha.

Results: : Annamaya and pranamaya koshas interventions came with the strongest evidence for

dietary sodium reduction and pranayama related breathing practices shown significant reductions in systolic and diastolic blood pressure, which is supported by basic science studies confirming improved autonomic and heart-rate variability parameters. Manomaya kosha showed moderate evidence with meditation and stress reduction trials which reduces sympathetic activity. Vijnanamaya and Anandamaya koshas came with comparatively weaker direct evidence but supported mainly by public health data of community-based lifestyle and awareness programs.

Conclusion: In these five koshas we found that it supports supports a tiered, integrative model of hypertension management that combines conventional treatment with diet, breathing practices, stress management and community-based prevention, rather than depending only on medication alone. This panchakosha theory showed evidence based and culturally relevant structure for integrated hypertension care, bridging classical Ayurvedic concepts with modern multi-domain evidence.

PP-10: Bridging ancient wisdom with epigenetics an integrative review of Yoga the methylome and kushtha

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Aims/Objectives: Eka Kustha is one among the Kshudra Kustha described in classics with features like dryness, scales over skin correlated with plaque psoriasis. Classics prescribes Yoga as adjunct management for Kustha, yet the molecular rationale for this recommendation applied specifically to Eka Kushtha, has never been systematically reviewed. Psoriatic skin carries DNA methylation signature and Yoga has shown to suppress transcription of shared inflammatory mediators including IL-6, TNF-α and RORγt, the master regulator of the Th17 axis in a related Th17-driven autoimmune disease. This paper proposes a conceptual framework linking Eka Kustha\'s classical management with this evidence specifically, that Yoga\'s demonstrated suppression of Th17-axis inflammatory gene transcription may extend to psoriasis and Eka Kustha with DNA methylation as mechanism worth testing directly.

Methods: Narrative and integrative review of classical Ayurvedic literature on Eka Kushtha and its yogic management, cross-referenced with peer-reviewed studies on Yoga-associated inflammatory gene suppression and DNA methylation in psoriasis, conducted.

Results: Eka Kustha\'s classical presentation correlates clinically with plaque psoriasis. Psoriatic skin carries a measurable epigenetic signature and Yoga suppresses transcription of the

shared IL-17/RORγt axis in a related autoimmune disease. No study has measured any of this in Psoriasis or Eka Kustha patients directly that extension is this review\'s proposed hypothesis.
Conclusion: Classics always suggested Yoga as adjunct management for Eka Kustha/Psoriasis, this review completes the missing puzzle of "molecular basis" by exploring the mechanism by which Yoga suppresses inflammatory gene transcription in a Th17-driven autoimmune disease, suppression of IL-6, TNF- α and RORγt transcription, tied to DNA mythalation which is of same axis that drives Psoriatic inflammation. On this basis Yoga can be considered more than just adjunct therapy for the management of Eka Kustha/Psoriasis. To establish this as a formal treatment protocol, clinical studies need to be undertaken measuring these inflammatory and epigenetic markers directly in Eka kustha/Psoriatic population.

PP-11: Effect of a residential integrated Yoga camp on perceived stress and glycated haemoglobin among women community-based evidence

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BACKGROUND: Chronic stress and dysglycaemia form a vicious cycle in women\'s health, yet few community-based interventions simultaneously address both. This study examined whether an integrated yoga-based programme could break this cycle, demonstrating measurable improvements across psychological and metabolic domains in real-world settings.

AIM: To evaluate the efficacy of a month-long residential integrated yoga camp in reducing perceived stress and improving glycaemic control in women across a diverse age spectrum (17–78 years).

Methods: Twenty-one women participated in a structured one-month residential integrated yoga camp featuring Simplified Kundalini yoga physical exercises, Meditation, Kayakalpa, Millet-based nutritional guidance, and Walking. Perceived stress (Perceived Stress Scale) and Glycated Haemoglobin (HbA1c) were assessed pre- and post-intervention.

Results: Participants achieved significant reductions in perceived stress (25.1 → 14.4, $p<0.001$) and HbA1c (6.77% → 6.07%, $p<0.05$). Notably, improvements persisted across varied ages and baseline metabolic states, indicating robust effectiveness in heterogeneous populations.
Conclusion: This evidence demonstrates that residential integrated yoga-based camps simultaneously ameliorate psychological stress and glycemic control in women. Such accessible, community-centered models represent scalable approaches for addressing interconnected mental-metabolic health challenges affecting women globally.

PP-12: Neuroscientific evidence behind swapna dreams and its role in rogi pariksha

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Patanjali Bhartiya Ayurvigyan Evam Anusandhan Sanstha, Haridwar

Aims/Objectives: To construct an integrative conceptual synthesis connecting classical Ayurvedic dream phenomenology with contemporary sleep neurobiology, evaluating how dream features function as valid non-invasive diagnostic and prognostic indicators during clinical Rogi Pariksha (patient examination).
Methods: A cross-disciplinary thematic analysis was conducted by integrating classical Ayurvedic scriptures (Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, Veda, and Darshanas) with empirical sleep neuroscience literature spanning polysomnography, PET/fMRI functional neuroanatomy, and spectral EEG dynamics.

Results: Neuroscientific Evidence: Positron Emission Tomography (PET) and functional MRI demonstrate that dreaming involves selective regional activation of high-order occipito-temporal visual cortices, limbic and paralimbic networks (amygdala, hippocampus, anterior cingulate), and medial prefrontal cortex, alongside marked dorsolateral prefrontal hypoactivation. Neurological lesion mapping confirms that forebrain structures, specifically the temporo-parieto-occipital junction and ventromedial prefrontal cortex white matter, are indispensable for top-down dream imagery generation. Quantitative EEG shows that N2 dreaming correlates with reduced relative slow oscillations (<1Hz) and increased power above 4Hz (theta, alpha, beta), reflecting localized cortical activation. Furthermore, Sadhak Pitta, situated in Hridaya (higher cortical centers), operates through central neurotransmitters (dopamine, serotonin) to dispel Tamas from consciousness and regulate emotional processing and sleep architecture. Role in Rogi Pariksha: Ayurvedic Acharyas across the Brihattrayee systematically integrated Swapna into Rogi Pariksha to determine individual Doshika Prakriti, identify early prodromal symptoms (Purvarupa), and recognize fatal prognostic indicators (Arishta Lakshanas) in the Indriya Sthana. Contemporary clinical neurology mirrors this diagnostic utility: altered dream narratives, recurring nightmares, and parasomnias like REM Sleep Behavior Disorder (RBD) serve as sensitive non-invasive biomarkers for early neurodegenerative decline, post-traumatic stress disorder, and autonomic nervous system dysregulation.

Conclusion: Synthesizing ancient Swapna-Vigyan with quantitative EEG spectral dynamics and functional neuroimaging establishes dream evaluation as a scientifically grounded, non-invasive clinical instrument for early disease

prediction, prognostic assessment, and holistic psychosomatic monitoring in modern medical practice.

PP-13: Can Siddha varmam therapy improve outcomes in autism spectrum disorder a retrospective chart review

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Dr. Ankit Kumar Meena, Associate Professor, Department of Pediatrics, All India Institute of Medical Sciences, Jodhpur

Aims/Objectives: The primary objective of this retrospective chart review is to assess the treatment outcomes in Autism Spectrum Disorder (ASD) children who received parent implemented Home based Varmam Therapy (HVT) along with standard from October 2023 to 2025 at a tertiary care hospital.

Methods: A 12-month observational study was conducted on ASD children (diagnosed as per DSM-5) 56 out of 230 children, aged 2-10 years who fulfilled the criteria referred from Paediatric Neurology OPD of Tertiary care referral hospital were taken for the study. All ASD children were recommended HVT and standard treatment. Parents/caregivers were given hands-on training of a structured Varmam therapy (HVT) along with routine diet and healthy lifestyle practices. Participants who regularly followed HVT for a period of one year were included in the study. Standard assessments, including CARS (Childhood Autism rating scale) and ISAA (Indian Scale of Autism Assessment) was carried on baseline and after 1 year.

Results: Mean age group of children was 3.7 years comprising 89% of boys. CARS and ISAA scoring at 1-year follow-up were statistically significant. At baseline 52%, 45%, 3% of children had mild, moderate, severe ASD respectively as per ISAA and after 1 year follow up it was found that 61% had mild, 5% had moderate ASD and 34 % did not fulfil the criteria for ASD as per DSM-5. ISAA scoring improved from a mean score of 104 to 78 and CARS scoring improved from a mean score of 37.25 to 31 after 1 year follow-up. Functional capacity in these children improved and about 60% children started schooling.

Conclusion: The integrated therapy module of Siddha Varmam therapy advocated as an add-on intervention for ASD as parent-implemented HVT brought behavioural progress and decreased the severity of autism. SVT needs to find position in ASD treatment paradigm. Further prospective studies with large sample size are required.

PP-14: Two pathways one brain a systematic scoping review of sleep-dependent and respiration-driven mechanisms linking Yoga to glymphatic function

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Aims/Objectives: The glymphatic system, a perivascular network that clears metabolic waste from the central nervous system, is traditionally described as most active during sleep, though this assumption was recently challenged by evidence that clearance may be reduced rather than enhanced during sleep and anesthesia. Yoga independently influences both sleep architecture and respiration-driven cerebrospinal fluid (CSF) dynamics, yet no primary study has directly examined its relationship to glymphatic function. This systematic scoping review aimed to map the existing literature bridging yogic practice and glymphatic clearance mechanisms.

Methods: Following PRISMA guidelines, PubMed, Scopus, Web of Science, the Cochrane Library, and clinical trial registries were searched using terms related to yoga, pranayama, meditation, glymphatic function, cerebrospinal fluid dynamics, and slow- wave sleep. Given the absence of direct empirical studies, eligibility criteria were extended to mechanistically adjacent physiological research.

Results: Findings were organized around two candidate pathways: a sleep-dependent pathway, supported by evidence that yoga nidra objectively increases slow-wave sleep and delta-wave activity, and a respiration-driven pathway, supported by evidence that inspiration directly modulates CSF pulsatility independent of sleep stage. One ongoing registered clinical trial was identified as the first study to directly test a yoga-based movement intervention for glymphatic clearance in Alzheimer\'s disease

Conclusion: A mechanistic rationale linking yoga to glymphatic function is plausible through both pathways, but direct empirical evidence remains absent, and primary studies are needed to test these relationships.

PP-15: Community-based cluster randomization for evaluating a Yoga intervention in rural India methodological benefits and implementation challenges

Meghana S,
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Dr. Mariamma Philip, Professor
NIMHANS

Aims/Objectives: Individual randomization can be problematic when participants are living in the same communities, interacting frequently, and receiving services via similar health-system structures, resulting in a risk of contamination. Cluster randomization, in which naturally occurring groups rather than individuals are randomized, may offer a pragmatic alternative by aligning the unit of randomization with the community-based mode of intervention delivery. This study aimed to describe the rationale, methodological benefits, and implementation challenges of using cluster randomization to evaluate a community-based yoga intervention in rural India

Methods: The YES intervention is a two-arm cluster randomized trial conducted in rural communities of Turuvekere and Thirthahalli taluks, Karnataka. Primary Health Centre (PHC) areas are the clusters and were randomly allocated to intervention or control arms. A total of 200 participants with severe mental disorders are planned for recruitment, with 100 participants in each arm. The six-month intervention is delivered through a structured yoga module. Cluster randomization was selected to align the unit of randomization with community-level intervention delivery and minimize potential contamination between participants within the same community. Cluster randomization has been completed in both study settings, and intervention activities have commenced in the allocated intervention clusters

Results: A total of 17 PHCs were randomized across two taluks. Turuvekere had nine PHCs of which three were selected for the control arm and six for the intervention. Thirthahalli had eight PHCs with four each in the control and intervention arms. Thus, seven PHCs were selected for the control arm and 10 for the intervention arm. The process of implementation highlighted methodological and operational aspects such as accounting for the adequate number of clusters, geographical accessibility and differences between clusters, and recruitment and retention of participants

Conclusion: Successful implementation requires careful consideration of statistical and operational factors, particularly cluster characteristics, geographical accessibility, participant recruitment and retention.

PP-16: Listening to communities integrating Yoga in community engagement program for improving well-being in rural Karnataka

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Ms. Roopa, Social worker
Mr. Harish, Social worker
Ms. Spoorti Yavagal, Yoga therapist
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Mr. Devaiah M K, Scientist
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NIMHANS

Aims/Objectives: Community engagement can strengthen mental health awareness by encouraging dialogue, addressing misconceptions, and connecting communities with available resources. As part of the Yoga-Based Extension Services (YES) Project of NIMHANS, Community Engagement Programmes (CEPs) were conducted in rural Karnataka. The aim is : To explore community perceptions of mental health and mental illness, understand perceptions of yoga, and promote yoga as a complementary practice for mental well-being

Methods: Nine CEPs were conducted in Thirthahalli (4; 199 participants) and Turuvekere (5; 328 participants). Participants included persons receiving mental health services, caregivers, ASHA workers, mental health professionals, health personnel, teachers, students, rehabilitation workers, and other community stakeholders. Six open-ended questions explored perceptions of mental health, mental illness, causes, treatment, yoga, and practices supporting mental well-being. Discussions were conducted in Kannada, transcribed, translated into English, and analysed using Braun and Clarke's reflexive thematic analysis.

Results: Good mental health was described as peace of mind, positive thinking, healthy relationships, social interaction, adequate sleep, and effective daily functioning. Stress, anxiety, depression, family and financial difficulties, and adverse life experiences were commonly perceived as contributors to mental health difficulties. Counselling, medication, family support, physical activity, meditation, social interaction, and yoga were identified as helpful. Yoga was viewed positively for promoting relaxation, concentration, emotional balance, and calmness.

Conclusion: Community engagement provided an opportunity to understand local perspectives while strengthening mental health literacy. Integrating community dialogue, mental health education, and accessible yoga may support mental well-being in rural communities.

PP-17: Rhythmic mantra based movement as an integrative mind body practice implications for mental wellbeing attention and sensorimotor coordination

Madan Prasad Singh, *Ananda Marga*
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Aims/Objectives: To develop an evidence-informed framework for Kirtan incorporating positive ideation, rhythmic vocalization and Lalit Marmik, a gentle alternating cross-body movement, and explore its relevance to mental wellbeing, cognitive health, healthy ageing and neurorehabilitation.

Methods: A narrative synthesis of evidence on chanting, mantra meditation, rhythmic auditory stimulation and music–movement practices was undertaken. Kirtan was examined as an integrated practice involving meaningful ideation, rhythmic auditory-motor entrainment, vocalization and measured bilateral movement.

Results: Evidence indicates that rhythmic auditory cueing can enhance motor timing, gait and balance, including in Parkinson's disease, through recruitment of auditory–motor and compensatory motor networks. Chanting studies demonstrate involvement of prefrontal and cingulate networks associated with attention and emotional regulation. In Kirtan, the combination of positive ideation, melodious rhythmic vocalization and measured Lalit Marmik movement may provide sustained attentional engagement, emotional orientation, sensory-motor coordination and rhythmic regulation without demanding strenuous physical exertion. These attributes suggest relevance not only to neurorehabilitation but also to everyday mental stability, cognitive engagement and healthy ageing.

Conclusion: Integrative mind–body practices combining meaningful ideation, rhythmic vocalization and coordinated movement may simultaneously engage cognitive, affective and sensorimotor processes. Evidence from chanting and rhythmic auditory stimulation suggests benefits related to attention, emotional regulation, motor timing and coordination. Kirtan may be conceptualized as an accessible integrative mind–body practice with preventive, promotive and rehabilitative potential. Its combined cognitive, affective, auditory and motor components provide a scientifically testable framework for supporting mental wellbeing and functional health across both healthy and clinical populations.

PP-18: From awareness to action a people-centred community sensitization model for accessible Yoga and mental well-being

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NIMHANS

Aims/Objectives: Community health programmes are more meaningful when they reflect people's needs, abilities, and everyday circumstances. The Yoga-Based Extension Services (YES) Project of NIMHANS integrates accessible yoga with mental health awareness to promote community health.

Methods: Programmes were conducted in Turuvekere and Thirthahalli for students, women and adolescent girls, ASHA workers, Anganwadi teachers, caregivers, persons with disabilities, patients, health workers, and teachers. Activities included awareness and sensitization programmes conducted around International Yoga Day, Women's Day, World Mental Health Day, and World Disability Day. Sessions addressed stress, mental health, stigma, caregiver concerns, women's health, disability rights, welfare support, and referral to mental health services, followed by Krida Yoga, chair yoga, asanas, pranayama, and relaxation. Yoga practices were adapted to participants' abilities and the setting. Participation and feedback were recorded.

Results: 527 participants in Turuvekere and 358 in Thirthahalli actively participated. Yoga was central, offering simple, adaptable practices that encouraged participation across diverse groups. Caregivers valued the emotional support and guidance. ASHA workers found the sessions relevant to their community work. Persons with disabilities and caregivers described adapted yoga as feasible and safe to practice, enjoyable and relaxing. The programmes also strengthened awareness of mental health, stigma, welfare support, and the importance of seeking professional care.

Conclusion: Integrating accessible and adaptable

yoga with mental health awareness was feasible across diverse community settings. The YES Project highlights yoga as a practical and inclusive component of community mental health promotion, supporting mental well-being, social inclusion, and connection with existing health services.

PP-19: Evaluation of sudarshan kriya Yoga SKY breath meditation as a treatment approach for stress and stress-related disorders

Raj Jadhav, *JSS University, Mysore*

Background: Mental health disorders are a leading global challenge, exacerbated post-pandemic. Standard treatments (including psychotherapy and pharmacotherapy) face limitations in effectiveness, cost, availability, and side effects. Alternative treatments including breathwork and meditation must be explored. Breathing acts as a global organizing signal for brain activity, not only in olfactory and respiratory circuits but also in regions linked to emotion, memory, and higher cognitive functions. Emotional and cognitive states shape breathing patterns, and consciously altering breathing can modulate emotion and cognition.

Aims: To evaluate Sudarshan Kriya Yoga (SKY), a breath-based meditation technique, as a treatment approach for stress-related disorders.

Methods: For this narrative review, PubMed and Google Scholar were searched using the terms: Sudarshan Kriya, SKY Breath Meditation, stress, PTSD, and depression. Published observational studies, randomized controlled trials, and reviews were included.

Results: SKY has demonstrated a 68–77% success rate in treating depression, with antidepressant effects emerging within 2–3 weeks. Several studies report remission within one month, with benefits sustained at three months, irrespective of depression severity or duration. As a standalone treatment, SKY is as effective as pharmacotherapy for depression and may offer superior relapse prevention. Significant anxiety reductions have been observed across diverse populations; in treatment-resistant individuals, a 73% response rate and 41% remission rate were reported. PTSD symptoms show significant improvement within 4–6 weeks, with benefits maintained at 6 months and 1 year in some studies.

An EEG study found that as SKY progressed, brain oscillations progressively slowed, transitioning from alpha to theta to delta waves. The brainwave patterns indicated a state akin to sleep but with awareness, aligning with the yogic concept of “transcendental state”. Biomarker findings include reduced cortisol/ACTH, increased prolactin, and short- and long-term gene-expression changes.
Conclusion: SKY can be offered as a cost- and staff-effective intervention and serve as a

promising adjunct treatment for stress-related disorders.

PP-20: Functional outcomes following integrative ayurvedayogaphysiotherapy rehabilitation in stroke a retrospective clinical audit of 20 patients

Meenu M, *Vaidyaratnam Nursing Home*

Aims/Objectives:
Background: Stroke frequently results in persistent motor impairment and limitations in functional independence. Rehabilitation addressing mobility, balance and activities of daily living is an important component of post-stroke care. This clinical audit examined functional outcomes observed following an individualized integrative rehabilitation programme incorporating Ayurveda, Yoga and physiotherapy.

Objective: To assess changes in functional independence among patients with post-stroke sequelae following an integrative rehabilitation programme.

Methods: A retrospective clinical audit was conducted using records of 20 patients with radiologically documented stroke who underwent rehabilitation at our centre. The cohort comprised 17 males and 3 females aged 24–85 years, with ischemic and haemorrhagic strokes involving different vascular territories. Patients received individualized Ayurveda interventions along with Yoga and physiotherapy according to neurological status and functional requirements. Functional independence was assessed using the Barthel Index (BI) before (BT) and after treatment (AT). Pre- and post-treatment scores were compared using paired analysis.

Results: The mean BI increased from 74.50 at baseline to 75.75 after rehabilitation, representing a mean change of 1.25 points. Five patients (25%) demonstrated a 5-point improvement, while 15 patients (75%) showed no numerical change in BI. Paired analysis showed a statistically significant difference between pre- and post-treatment BI scores ($t=2.52$, $df=19$, $p=0.021$).

Conclusion: This retrospective clinical audit documented a statistically significant change in functional independence following an individualized integrative rehabilitation programme. The modest magnitude of change and absence of numerical improvement in most patients highlight the need for cautious interpretation. Prospective studies with larger samples, standardized rehabilitation protocols and multidimensional neurological and functional outcome measures are warranted.

PP-21: Yoga for anxiety and depression in irritable bowel syndrome through the gut-brain axis a scoping review

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Aims/Objectives: To map published evidence on yoga for anxiety and depression in IBS, the gut-brain pathways examined (vagal tone, cortisol, inflammation, microbiome), and research gaps. Yoga is being explored for such gut-related mood symptoms.

Methods: A PRISMA-ScR-guided scoping review is in progress. Preliminary findings below are drawn from published systematic reviews identified in an initial literature scan; systematic multi-database searching and data charting are ongoing.

Results: Published syntheses disagree. A 2025 meta-analysis of 11 randomized trials (535 patients) found no significant effect of yoga on IBS symptoms, anxiety, depression or quality of life, citing heterogeneity and high bias risk. A 2025 systematic review reported improved gastrointestinal symptoms, anxiety and depression versus usual care or wait-list, calling for larger studies. A 2026 review of yoga and meditation effects on gut microbiota included four studies, all in healthy individuals. Ayurvedic case reports of grahani roga describe improved IBS and anxiety scores.

Conclusion: Published evidence on yoga for anxiety and depression in IBS is inconsistent. Completing this scoping review will chart the gut-brain pathways studied and explore Ayurvedic agni–manas concepts as an integrative framework for future research.

PP-22: Modulation of stress-related neuropsychiatric manifestations in paediatric irritable bowel syndrome following Ayurvedic intervention a case report exploring the gutbrain interaction

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Sri Jayendra Saraswathi Ayurveda College and Hospital

Aims/Objectives: To explore whether the proposed Ayurvedic intervention produces parallel improvement in gastrointestinal symptoms and neuropsychiatric stress manifestations in a 13-year-old patient with IBS-D, thereby examining the clinical relevance of the Ayurvedic concept of Manas–Sharira interrelationship in relation to the contemporary microbiota–gut–brain axis.

Methods: A prospective single-case assessment was conducted in a 13-year-old male with a paediatric disorder of gut–brain interaction (DGBI), clinically diagnosed as IBS after

exclusion of significant organic pathology. The condition was correlated with Grahani Roga, Vata–Pitta predominance, and Manovaha Srotas involvement. The individualised protocol included supervised Virechana Karma, Pichha Vasti, and Pada Abhyanga, with particular emphasis on the potential neuropsychiatric role of Pada Abhyanga in reducing stress, anxiety-related symptoms, sleep disturbance, and emotional reactivity associated with DGBI. Gastrointestinal symptoms, bowel pattern, neuropsychiatric manifestations, and quality of life were assessed before and after treatment using IBS-SSS, BSFS, IBS-QOL, and an age-appropriate psychological assessment tool. Treatment tolerability and adverse events were monitored, and outcomes were analysed descriptively as within-patient changes

Results: Following treatment with Virechana Karma, Pichha Vasti, Pada Abhyanga, and individualized dietary and lifestyle measures, the 13-year-old patient demonstrated progressive improvement in the symptoms of pediatric disorder of gut–brain interaction (DGBI). Reduction in gastrointestinal symptom severity and normalization of bowel pattern were accompanied by decreased psychological stress, improved emotional regulation, sleep, daily functioning, and overall quality of life. Corresponding improvement was observed in the IBS-SSS, BSFS, and IBS-QOL scores during treatment and subsequent follow-up assessments. These findings suggest parallel improvement in somatic gastrointestinal and neuropsychiatric manifestations, highlighting the relevance of the gut–brain interaction in pediatric IBS and its Ayurvedic correlation with Grahani Roga involving Manovaha Srotas.

Conclusion: Virechana Karma, Pichha Vasti, and Pada Abhyanga were associated with improvement in IBS symptoms, stress-related DGBI manifestations, and quality of life, supporting further controlled studies to validate Panchakarma's gut–brain therapeutic potential in pediatric IBS.

PP-23: Sowa Rigpa and mental disorders a scoping review of clinical evidences with an illustrative case

Pranav Gaur, *University of Rajasthan*

Aims/Objectives: Investigate the clinical evidence-based significance of Sowa Rigpa interventions in treating mental disorders.

Methods: Methods: Relevant sources were identified and reviewed through a scoping review to map the available literature on the conceptualization, diagnosis, and management of mental disorders within Sowa Rigpa, with particular attention to traditional diagnostic principles and therapeutic approaches. An illustrative case was additionally documented to examine the practical application of these

principles in a real-world clinical context. The patient, whose identity has been concealed, presented with a 5-month history of stress-associated psychotic symptoms, including delusions and hallucinations. Following psychiatric treatment, the patient independently elected to pursue a course of Sowa Rigpa interventions at Men-Tsee-Khang, Jaipur. During the subsequent course, the patient discontinued psychiatric support and continued with Sowa Rigpa interventions. The therapeutic regimen included Bimala, Rinchen Ratna Samphel, Loong Tea, Tsanglha, Men Soom, and other prescribed interventions. As part of the holistic management approach, the patient also adopted regular physical exercise, including gym-based activity and yoga. Dietary and behavioral advice provided by the amchi included avoidance or reduction of strong coffee and tea, minimization of stress, and avoidance of raw foods. During the course of follow-up, the patient remained motivated to continue his studies and subsequently demonstrated satisfactory academic performance, including achieving good marks. The patient\'s clinical journey was documented by the author and examined alongside the findings of the scoping review to explore areas of convergence between the reported clinical experience and the traditional Sowa Rigpa framework.

Results: The clinical course was broadly consistent with themes identified in the scoping review, particularly the traditional Sowa Rigpa understanding of mental disturbances and its emphasis on individualized, holistic management.

Conclusion: The findings suggest potential relevance of Sowa Rigpa's individualized and holistic approach in mental healthcare, warranting further systematic clinical research to establish its safety and therapeutic efficacy.

PP-24: An Ayurvedic and integrative perspective on microglial modulation in multiple sclerosis

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Aims/Objectives: Multiple sclerosis (MS) is an autoimmune disease of the central nervous system characterized by neuroinflammation, demyelination and progressive neurodegeneration. Microglia are the resident innate immune cells in the CNS, they play an important role in the processes of demyelination and remyelination in MS. Activated microglia promote inflammation, oxidative injury and oligodendrocyte damage, while other functional states facilitate myelin-debris clearance, tissue repair and remyelination. Their plasticity is strongly influenced by the surrounding cellular and metabolic microenvironment. This Study aims to interpret microglial state modulation in MS through Ayurvedic principles and explore integrative strategies that may influence the

neuroinflammatory environment.

Methods: A narrative review of classical Ayurvedic texts and contemporary literature was conducted using PubMed, Google Scholar and relevant Ayurvedic databases. Studies addressing Ayurveda, microglial modulation, neuroinflammatory pathways, gold nanomaterials, myelin-debris clearance and remyelination in MS were reviewed. Experimental, clinical and review articles with relevance to microglial function and neuroprotection were prioritized. Findings were synthesized with Ayurvedic concepts of Doṣa, Āvaraṇa and Majja Dhātu to identify possible parallels with inflammatory and reparative microglial states. The resulting evidence was integrated to develop a conceptual framework for microglial modulation in MS.

Results: From an Ayurvedic perspective, factors influencing microglial polarization was conceptually interpreted through Āvaraṇa and Pitta involvement in Majja Dhātu. A shift toward reparative microglial states may be interpreted as restoration toward Doṣa-Dhātu Sāmya, favoring inflammation resolution, myelin-debris clearance and remyelination in MS. Available experimental evidence suggests that Ayurvedic and integrative interventions may modulate microglia-associated inflammatory and oxidative pathways (NF-κB, NLRP3 and Nrf2 pathways,) with potential relevance to myelin-debris clearance and remyelination.

Conclusion: Integrating Ayurveda with conventional MS care may offer a multimodal approach to neuroinflammation and neuroprotection. A better understanding of the diversity of roles of microglia during inflammation and regeneration in the CNS will contribute to establishing new therapeutic strategies for MS patients.

PP-25: Chemical profiling and neuroprotective effects of different ghee samples data fromusing gas chromatogrphy and Caenorhabditis elegans models

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The University Of Transdisciplinary Health Science And Technology

Aims/Objectives: To characterize the fatty acid composition of different ghee samples using GC analysis and to evaluate their biological effects using Caenorhabditis elegans.

Methods: Different commercially available ghee samples were subjected to gas chromatography-based chemical profiling to characterize their fatty acid composition. The identified fatty acids included saturated, monounsaturated, and polyunsaturated fatty acids with potential biological relevance to nervous system function. Biological effects of the ghee samples were evaluated using C. elegans chemotaxis assays and

movement assays to assess age-related locomotor changes. Chemotaxis was assessed based on the number of worms responding to different ghee samples, while movement phenotypes were categorized as spontaneous, induced, and defective movement.

Results: The chemical profiles of the ghee samples were broadly comparable, although distinct variations were observed in individual fatty acids. Notable compounds included methyl linolenate (omega-3), gamma-linolenate, palmitoleate, nervonate, eicosadienoate, and arachidonic acid derivatives. Several of these fatty acids have documented biological associations with myelination, neurotransmission, neuroinflammatory pathways, and neuroprotection. In the C. elegans assays, the ghee samples produced differential chemotactic responses, indicating variation in their effects on worm chemosensory behavior. The experimental observation indicated that Akshayakalpa produced the highest chemoattractive response. Differences were also observed in movement-related phenotypes exposure to the ghee samples.

Conclusion: The study states that, despite broadly similar overall chemical profiles, different ghee samples exhibit distinct variations in fatty acid composition and differential biological effects in C. elegans. The observed differences in chemotaxis and movement may be associated with variations in the fatty acid composition of the samples. The findings support further investigation using mechanistic and molecular approaches, particularly to determine whether dopaminergic signalling contributes to the observed behavioural responses. Correlation between the chemical composition and biological activity remains to be elucidated.

PP-26: Traditional pranayama in playful practice breathing techniques for energy regulation in early childhood

Samruddhi Karnik, *Research Scholar*
Self Employed

Aims/Objectives: This study explores the impact of introducing traditional pranayama techniques to early childhood learners through playful adaptations. The primary objective was to regulate children's high energy levels and foster calmness during the initial hours of classroom activity.

Methods: A cohort of 210 children aged five years participated in daily 25-minute sessions over two weeks at the start of the school day. Breathing practices such as box breathing, star breathing, and bumblebee breath were employed to familiarize children with yogic breathing in an engaging, age-appropriate format. Data was collected through teacher observations and open-ended questionnaires.

Results: Results indicated a significant reduction in hyperactive behaviors, with children demonstrating greater calmness, attentiveness, and

readiness for learning during the first half of the school hours. Teachers consistently reported improved focus and classroom harmony following the breathing sessions.

Conclusion: The findings highlight the potential of integrating pranayama into early childhood education as a culturally rooted practice that supports energy regulation, emotional balance, and holistic well-being from the earliest stages of development and learning.

PP-27: Effect of Yoga based lifestyle intervention and brisk walking on cognitive functions in office
e employees two arm randomised controlled trial

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Central Council of Research in Yoga and Naturopathy (CCRYN- CRIYN)

Background - Work-related stress is a major source of stress in adulthood and reflects chronic exposure in midlife. It has been associated with lower performance in delayed recall, verbal fluency, and executive functions in middle-aged workers. Yoga has been moderately associated with improvements in cognition with stronger effects for attention and processing speed, followed by executive function and memory. Limited studies have examined short-term effects and tele-yoga approaches for assessing neurocognitive abilities in working middle-aged and older adults.

Aim - To study the comparative effect of yoga and brisk walking on attention and processing speed among office employees using a two-arm randomised controlled trial design. Objectives - To assess processing speed using Digit Symbol Substitution Test, selective attention using Color Trail Test 1, and cognitive flexibility using Color Trail Test 2.

Methods: A randomized controlled trial was conducted for 6 months comparing yoga practice with brisk walking in a work-site setting among office employees. The Digit Symbol Substitution Test was used to measure processing speed, and the Color Trail Test was administered to assess selective attention and cognitive flexibility. 99 participants between 35-64 years were recruited through advertisements and emails circulated in local offices targeting workers in Bengaluru.

Results: Both groups demonstrated improvement in post-intervention scores, with significant within-group differences indicating positive effects of both interventions on cognitive performance. However, between-group comparisons did not show statistically significant differences across overall Color Trail test or Digit Symbol Substitution Test outcomes, suggesting that short-term cognitive benefits of yoga were

comparable to brisk walking.

Conclusion: Both yoga and brisk walking were effective in improving cognitive performance within a short period, with no significant overall between-group differences. Yoga showed comparatively greater improvement in younger participants for selective attention. These findings indicate yoga as a feasible and culturally adapted option for cognitive enhancement when practiced consistently and initiated earlier.

PP-28: Effectiveness of an integrated protocol in substance use disorder - a black box design

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Final Year MD Scholar, Manivigyan evum Mansaroga,
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Aims/Objectives: Substance Use Disorder (SUD) is a chronic, complex, and relapsing disorder characterised by a problematic pattern of psychoactive substance use resulting in clinically significant impairment in health and social functioning. Only a small proportion of the 64 million affected with SUD globally receive adequate treatment. The chronic and recurrent nature of SUD, high relapse rates and associated deterioration in quality of life(QOL) contribute substantially to its public health burden. Existing management approaches have limitations related to relapse prevention and long-term rehabilitation. This emphasises the need for multidimensional treatment strategies. SUD can be approached on an individualised basis through Śodhana, Śamana, and Sattvavajaya. The study aimed to assess the effectiveness of an integrative protocol combining Ayurveda, Yoga, and psychotherapy in SUD.

Methods: The study was conducted using a Black Box design as a single group among 18 participants aged 18–50 years who met DSM-5 criteria for mild to moderate SUD. Participants underwent a 21-day integrated protocol. Ayurvedic management comprises Sadyovirechana, Shirodhara, Talam, Rukshana, Dosha-specific Snehapana, followed by Virechana. Concurrently, AYUSH-Yoga protocol, CBT and Family Counselling were administered. Assessments were conducted at baseline and post-intervention using the Drug Avoidance Self-Efficacy Scale(DASES) and Quality of Life Enjoyment and Satisfaction Questionnaire(Q-LES-Q-SF). Data were analysed using the Wilcoxon Signed-Rank Test and Paired t-test.

Results: Statistically significant improvement was observed in DASES total and domain scores($p<0.001$), indicating enhanced confidence in resisting substance use across emotional, social, craving-related, and relapse-related domains. Significant improvement was also observed in Q-

LES-Q-SF scores($p<0.05$), reflecting improvement in QOL across multiple domains. Conclusion: The protocol demonstrated significant effectiveness in improving drug avoidance and QOL in mild to moderate SUD and was also safe. Individualised Ayurvedic approach integrated with Yoga and Psychotherapy, is capable of offering a promising solution for the effective management of multiple substance use in future.

PP-29: Raga-based music therapy as satvavajaya for competitive exam-related psychological distress a pilot study

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Aims/Objectives: Introduction: Competitive examinations act as a significant psychological stressor, often leading to anxiety, depressive symptoms, and sleep disturbances that negatively affect their performance in exams leading to poor outcome as well as reduced quality of life. Satvavajaya Chikitsa is aimed at restoring psychological balance by incorporating several therapeutic approaches. Music therapy as a form of Satvavajaya, offer cost-effective, and easily deliverable intervention for mental health promotion by influencing emotional and cognitive processes. Objectives: To evaluate the feasibility and clinical effectiveness of structured raga-based music therapy for exam related - anxiety, depression, and insomnia.

Methods: Methodology:17 participants were enrolled in the pilot study. Group A included 6 UPSC aspirants with exam-related anxiety received Raga Bilahari or Raga Darbari Kanada. Group B comprised 8 KPSC aspirants with mixed anxiety and depressive symptoms following repeated exam failures. Participants received Raga Hamsadhwani or Raga Mohanam. Group C consisted of 3 participants with insomnia who received Raga Anandabhairavi or Raga Neelambari. The music therapy was administered 20 minutes daily in all the groups for 10 days preceding the date of examination. HAM A was used for assessment in group A, both HAM A and HAM D in group B and Insomnia Severity Index (ISI) in group C.

Results: Post-intervention assessment demonstrated improvement in anxiety, depression and insomnia in the respective scales among the groups. Concentration, emotional regulation, motivation, confidence, and overall well-being were also reported as improved by the participants. The intervention was compliant throughout and without any adverse events or dropouts.

Conclusion: Structured raga-based music therapy appears to be feasible, safe, and economically sustainable in the psychological distress associated with competitive exams. The preliminary findings

suggest to the scope of further studies exploring the integration of traditional music-based interventions into contemporary psychiatric and integrative mental health care.

PP-30: Effectiveness of integrated protocol in competitive anxiety among judo players a pretest-posttest design

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Aims/Objectives: Optimal psychological well-being is crucial for enhanced sports performance. Competitive anxiety (CA) is the situation-specific negative emotional reaction in response to a perceived threat to performance and affects nearly 8.6% of elite sports professionals. The combative nature, one-on-one exposure with no teammates to buffer errors, and strict weight-category pressures create cognitive and somatic anxiety among Judokas. This results in attentional narrowing, slowed reaction time, and physical exhaustion. Cognitive behavioural therapy, music therapy, and group therapy have proven effective, but rarely utilized by players and less integrated into regular training regimens. This is due to institutional barriers, stigma, or lack of accessible sports psychology infrastructure. This persistent gap underscores the need for holistic and culturally integrated strategies easily adoptable by athletes. The individualized approach through Ayurvedic interventions is emerging as a practical alternative in relieving CA in clinical settings. Such an approach is ideal as well as useful in the management of CA observed in various sports events. The objectives of the study were to assess the effectiveness of a selected integrated protocol in CA, psychological efficacy and perceived stress among judo players.

Methods: A 31-day protocol including Aśvagandhā tablet, Satvāvajaya cikitsa, and group therapy was administered to 19 participants with mild to moderate scores (17-24) on the Sports Competition Anxiety Test (SCAT). The assessments were done on 0th and 31st days and data analyzed using Wilcoxon signed-rank test.
Results: The protocol was significantly effective ($p < 0.01$) in reducing the symptoms of CA in SCAT and in perceived stress ($p<0.001$) as per Perceived Stress Scale. There was also significant enhancement in psychological efficacy ($p<0.01$) as per Athletes\' Self-Efficacy Scale.

Conclusion: The results highlight the scope of controlled studies in CA, even in other sports events. Integrating Ayurveda modalities in sports psychology is expected to enhance the nation’s sports outcomes in future.

PP-31: Effectiveness of varavialadi kasaya and guduci curna in mixed anxiety and depressive disorder pre-test post-test design

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Aims/Objectives: Mixed Anxiety and Depressive Disorder (MADD) is characterized by the coexistence of anxiety and depressive symptoms, causing significant distress and functional impairment. Ayurveda correlates this condition with Viṣāda, Cittodvega, and Unmāda Pūrvārūpa, involving predominant Vāta–Kapha doṣa duṣṭi with Rajas and Tamas disturbance. Hence, the present study evaluated the effectiveness of Varāviśālādi Kaṣāya and Guḍūcī Cūrṇa in MADD Methods: The study was conducted as a single-group pre-test post-test clinical design in the OPD setting of VPSV Ayurveda College Hospital, Kottakkal. Twelve participants diagnosed with MADD according to ICD-11 criteria were selected. Participants were administered Varāviśālādi Kaṣāya along with Guḍūcī Cūrṇa for 30 days, followed by a 15-day follow-up period. Assessments were carried out at baseline, during treatment, after treatment, and follow-up using the Mini-MASQ and Q-LES-Q-SF. Statistical analysis was performed using appropriate statistical methods based on the distribution and nature of the variables.

Results: The intervention produced statistically significant improvements in all major domains of Mini-MASQ and Q-LES-Q-SF. Participants also demonstrated noticeable improvement in emotional stability, sleep, daily functioning, and overall quality of life. Progressive reduction in symptom severity was observed across successive assessments, indicating sustained therapeutic benefit even during follow-up. No serious adverse effects were reported during the study period.

Conclusion: The findings suggest that Varāviśālādi Kaṣāya and Guḍūcī Cūrṇa may help in reducing both anxiety and depressive symptoms while improving quality of life in individuals with MADD. The probable therapeutic action may be attributed to their Medhya Rasāyana, Tridoṣaśāmaka, Balya, and stress-modulating properties, which help restore mental equilibrium and improve adaptive capacity to stress. The study highlights the scope of Ayurvedic interventions in the management of conditions such as Mixed Anxiety and Depressive Disorder (MADD), which is increasingly encountered in contemporary psychiatric practice.

PP-32: Panchakarma based interventions in stroke and peripheral neuropathy a scoping review of clinical and functional outcomes

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Aims/Objectives: To map and characterize the available clinical evidence on Panchakarma-based interventions, particularly Basti and Virechana with or without Snehana and Swedana, in individuals with stroke and peripheral neuropathy, with emphasis on clinical and functional outcomes
Methods: A scoping review will be conducted following Joanna Briggs Institute methodology and reported according to PRISMA-ScR. The review question will be structured using the Population–Concept–Context framework. PubMed/MEDLINE, Scopus, Web of Science, Embase, AYUSH Research Portal and DHARA will be searched, supplemented by citation and reference-list searching. Human studies involving stroke or peripheral neuropathy and Panchakarma interventions will be eligible. Randomized and non-randomized clinical studies, observational studies, case series and case reports will be considered. Data will be charted on neurological condition, intervention characteristics, treatment duration, co-interventions, outcome measures, clinical and functional outcomes, follow-up and safety. Findings will be synthesized descriptively using evidence tables and evidence mapping.
Results: The review will map evidence according to neurological condition, Panchakarma procedure, treatment characteristics, study design and outcome domains, including motor function, mobility, balance, activities of daily living, disability, pain, sensory disturbances and quality of life.

Conclusion: This scoping review will provide a structured overview of Panchakarma-based interventions in stroke and peripheral neuropathy, identify evidence gaps and variations in treatment protocols and outcome assessment, and inform priorities for future clinical research and standardised Panchakarma-based approaches in neurological care and rehabilitation.

PP-33: Ayurvedic management of kampa tandava roga as an upadrava of madhumeha diabetic striatopathy a case study

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Lakshmana Prasad, Professor
Dr DY Patil Vidypeeth, Dr DY Patil College of Ayurved and Research Centre, Pimpri, Pune.

Aims/Objectives:
Background: Diabetic striatopathy is a rare neurological complication of uncontrolled diabetes mellitus characterized by involuntary choreiform movements. In Ayurveda, such manifestations can be correlated with Kampa or Tandava Roga, occurring due to aggravated Vata Dosha and Dhatu Kshaya. This case study explores the role of Ayurvedic management in improving the symptoms of diabetic striatopathy.

Aim: To evaluate the effect of Ayurvedic interventions in the management of Kampa (Tandava Roga) associated with diabetic striatopathy.

Methods: A 59-year-old male with a 15-year history of diabetes mellitus presented with involuntary movements of the left upper and lower limbs, speech difficulty, numbness, and tingling sensations. MRI findings suggested diabetic striatopathy. The patient was treated with Matra Basti using Bala Taila for 7 days, followed by Rajayapana Basti in Kala Basti schedule and Nasya with Ksheerabala Taila for 7 days. Internal Ayurvedic medications targeting Vata correction and neuro-muscular support were administered concurrently. Clinical assessment was performed using the Abnormal Involuntary Movement Scale (AIMS).

Results: After 30 days of treatment, the patient showed marked reduction in involuntary movements, improvement in speech, and better functional ability. AIMS scores demonstrated progressive improvement across facial, extremity, trunk, and global assessment parameters.

Conclusion: This case highlights the potential role of Ayurvedic therapies, particularly Basti and Nasya, in managing neurological manifestations of uncontrolled diabetes. The observed clinical improvement suggests that Ayurvedic interventions may offer a safe and effective integrative approach for diabetic striatopathy and related Vata Vyadhis.

PP-34: An integrative approach to kampavata a case study

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Aims/Objectives: To document and evaluate the clinical efficacy of an integrative treatment combining Ayurvedic treatments with physiotherapy and yoga in reducing tremor severity, improving functional mobility, and lowering MDS-UPDRS scores.

Methods: A 62-year-old female with a 6-month onset of tremors, stiffness, chronic constipation, and disturbed sleep. The tremors caused significant distress during social interactions, triggering situational exacerbation. Assessment was recorded at baseline and post-treatment using the UPDRS. The patient completed a comprehensive treatment protocol for 8days comprising- Ayurvedic interventions: like Utsadana, Upanaha, Bandhana, Shiropichu, Shirodhara and Basti, and internal Ayurvedic medications along with Rasayana. Simultaneously, Physiotherapy and Yoga focusing on balance, flexibility, and joint mobility were done.

Results: The patient demonstrated a notable symptomatic improvement, evidenced by a reduction in resting tremor frequency and severity, alleviation of stiffness, and enhanced sleep quality. Objective clinical assessment showed a notable decrease in scores on the MDS-UPDRS.

Conclusion: : The present case demonstrates an improvement in tremor severity and MDS-UPDRS scores following an individualized Ayurvedic therapeutic intervention. The observed clinical response suggests that an integrative Ayurvedic approach have potential as a supportive strategy for the management of tremor and associated symptoms in patients with Parkinson disease. This case is therefore presented to highlight clinical experience in managing Kampavata, within a short duration of Integrative Ayurvedic management.

PP-35: Integrative Ayurvedic approach in management of apasmara epilepsy in pediatric patient a case report

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Aims/Objectives: To evaluate the role of Shamana and Panchakarma Chikitsa(Matra Basti and Pratimarsha Nasya) in managing pediatric patient with Apasmara (Epilepsy) alongside conventional antiepileptic medication.

Methods: A 7-year-old female child diagnosed with refractory focal epilepsy presented to the Kaumarabhritya OPD, Institute for Ayurved Studies and Research, Kurukshetra, with daily seizure episodes for six years. The first seizure occurred at nine months following accidental head trauma due to a fall from bed. Episodes involved upward rolling of eyes, left-sided onset, and preceding screaming, despite ongoing antiepileptic drug (AED) therapy. Shamana Chikitsa and Panchakarma Chikitsa (Matra Basti and Pratimarsha Nasya) was administered for 200 days(total duration of treatment) without discontinuing AEDs. Clinical assessment and assessment of severity of seizures by Hague seizure severity scale was conducted before and after the interventions. Patient's quality of life has been assessed by QOLIE-31.

Results: The integrative treatment approach demonstrated improvement in the child\'s clinical condition and reduction in score of Hague seizure severity scale and improvement in QOLIE-31 score.

Conclusion: Shamana and Panchakarma Chikitsa, integrated with conventional antiepileptic medication, may offer a supportive management strategy for Apasmara(Epilepsy). Further systematic studies using structured clinical protocols are required to establish efficacy and safety.

PP-36: Role of Yoga and Ayurveda in managing cognitive disorders a systematic review of clinical evidences

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Aims/Objectives: The cognitive disorders , including mild cognitive impairment, age related memory loss pose a growing global healthcare challenge. This systematic review aims to evaluate the therapeutic role and clinical efficacy of integrative yoga practices and ayurvedic interventions in preserving memory, attention and cognitive function among the individuals with cognitive disorders.

Methods: A systematic literature search was conducted across PubMed, Scopus and Google scholar for clinical studies published over the past decade. The clinical trials were selected evaluating yoga interventions such as pranayama, kundalini yoga and ayurvedic interventions such as medhya rasayana, shirodhara. Then outcomes from different cognitive function evaluating tools were extracted and data\'s were analyzed systematically.

Results: The pooled results revealed that both yoga and ayurvedic interventions produced significant improvements in overall cognitive performance among the patients. The practice of structured yoga exhibited enhanced functioning, better memory and reduced stress. Similarly ayurvedic formulations and therapies brought improvement in memory recall scores and certain favorable changes in the cognitive functioning.

Conclusion: Clinical evidence shows that both yoga and ayurveda are effective and they supports the cognitive health of the individual. Implementing these integrative approaches in the early clinical management of cognitive decline helps to slow up the disease progression and enhances the patient well being as well as the quality of life.

PP-37: Yoga-based sattva guna enhancement programme a culturally grounded framework for strengthening psychological capital

Ishika Agarwal, *Research Scholar*
Dr. Sruthi Sivaraman, Head, Assistant Professor
Kristu Jayanti (Deemed to be University)

Aims/Objectives:
Background: Mental Health Research has increasingly shown importance to Psychological Capital, a concept in Positive Psychology that includes Hope, Efficacy (Self Efficacy), Resilience and Optimism as a vital personal resources for an individual. In Indian Perspectives, Sattva Guna, a quality mentioned in Triguna Concept is represented as a mental state marked by clarity, inner calm, balance. Whereas there are multiple

studies conducted that showed regular yoga helps in improving overall wellbeing of an individual. This study focuses on examining how yoga can nurture Sattva Guna in order to develop and sustain Psychological Capital.

Aim: This study aimed to synthesized existing literatures to develop a conceptual framework for a Yoga-Based Sattva Guna Enhancement Programme (YBSEP) aimed at increasing Sattva Guna and building psychological capital.

Methods: An integrative literature review for papers was carried out across major scientific and psychological databases. Studies based on Yoga practices, Sattva Guna and Psychological Capital were organized into core themes to connect and build a conceptual framework using thematic analysis that helped in connecting specific yoga practices with traditional mental qualities and contemporary psychological resources.

Results: The reviewed studies showed that regular yoga helped individuals in managing stress and regulate their emotions. Higher Sattva Guna was also consistently linked to mental clarity, calm and balance. These two research categories were developed separately. In order to bridge this gap, a conceptual model framework was designed to show that yoga practices like physical postures, breathing exercises and meditation helped in cultivation of Sattva Guna, which provided a mental foundation needed to develop and sustain hope, efficacy, resilience and optimism.

Conclusion: The study provided a culturally grounded framework that linked Yoga and Sattva Guna to Psychological Capital by providing a strong and necessary groundwork for implications.

PP-38: Basti in post-stroke rehabilitation the gut-brain axis

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Aims/Objectives:
Background: Pakshaghata can be compared clinically with post-stroke hemiplegia. Stroke affects more than movement. It can disturb autonomic function, gut motility, intestinal barrier function and the gut microbiota. Brain injury releases inflammatory signals and damage-associated molecules that can activate microglia and other immune pathways. These changes may influence the gut and create a two-way brain-gut feedback loop and a continued inflammation bidirectionally.

Methods: Why Basti Is Relevant Basti is considered an important treatment for Vata disorders in Ayurveda. From a modern anatomical

and physiological view, its local action occurs mainly in the rectum, sigmoid colon and descending colon. These regions contain rich venous drainage (inferior rectal, middle rectal, superior rectal and inferior mesenteric veins). They also contain enteric (myenteric and mesiener's plexus) and autonomic nerves (Pelvic splanchnic nerves S2-S4, Inferior mesenteric ganglion) that communicate with the central nervous system.

Results: Possible Mechanisms Local neural stimulation: Rectal and colonic distension can activate sensory nerve endings and enteric neuronal pathways. Vagal and autonomic pathway: Signals from gut metabolites are sensed by the vagus nerve, which provides a route for gut-brain communication. Direct mucosal drug absorption: Sneha basti has lipid-soluble components that can be absorbed, especially with long retention time. In Kashaya basti, some amount is also expected to be absorbed. Immune and microbiota pathway: The intestinal mucosa and microbiota interact closely with the immune system. Basti may help improve gut permeability, microbial balance and reduce inflammatory mediators, and thereby influence systemic and neuroinflammatory processes.
Conclusion: Basti can be studied not only as a local bowel intervention but as a potential gut-brain intervention. In post-stroke rehabilitation, its role may be understood through the combined effects of colonic stimulation, enteric neuronal activity, autonomic and vagal signalling, gut hormones, immunity and the microbiota.

PP-39: Personalized Ayurvedic protocol for behavioural improvements in children with neurological comorbidities in autism spectrum disorder - a case series

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Aims/Objectives: Autism Spectrum Disorder (ASD), a heterogeneous neurodevelopmental condition characterized by persistent challenges in social communication, interaction, repetitive patterns of behavior or activities. Several neurological comorbidities are observed in ASD which can complicate autism symptoms, particularly in girls exhibiting "masking" behaviors. This may cause delay in ASD identification especially in girls, at a significantly later stage than in male counterparts. In the study, the early manifestation of neurological comorbidities was analyzed and managed with personalized Ayurvedic protocol.

Methods: Three female children, diagnosed with ASD as per DSM 5-TR Criteria, one was having comorbid Intellectual Developmental Disorder and the other two were having seizure disorder. All were having selective mutism, solitary play, restlessness with wandering nature and decreased eye contact, which was undiagnosed in early stage due to neurological comorbidities. After the detailed clinical evaluation, personalized

Ayurvedic management protocol was designed on individualized basis. This included initial virechana, rookshana, abhyanga, nasya, anuvasana and appropriate internal medicines including rasayanas, as per dosha analysis and the compliance.

Results: Assessments were done based on clinical improvement, Indian Scale for Assessment of Autism score (ISAA) and Autism Behavior Checklist (ABC) on 0th day and last day of protocol. All the cases showed improvement along with reduction in scores.

Conclusion: Early childhood screening to identify ASD is the need of the hour particularly in female children, with neurological comorbidities, for enhanced outcome. Personalized Ayurvedic protocols considering comorbid conditions are effective as well as safe in modifying behavior in children with ASD, and points to the scope for further studies.

PP-40: Anatomical perspective of facial motor retraining in adrita relevance of selected pranayama practice

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Aims/Objectives: To describe the anatomical basis of facial motor dysfunction in Adrita and explore the possible anatomical and functional relevance of Bhramari, Sitali, and Sitkari Pranayama as complementary practices in facial motor retraining.

Methods: A narrative anatomical and literature-based review was undertaken. The course and distribution of the facial nerve, its relationship with the facial nucleus and muscles of facial expression, and the functional basis of facial movements were reviewed. The orofacial and upper-airway movements associated with Bhramari, Sitali, and Sitkari Pranayama were examined in relation to facial motor control, sensory feedback, neuromuscular coordination, and facial rehabilitation. Published literature on facial exercise and neuromuscular retraining in peripheral facial palsy was also considered.

Results: The facial nerve supplies the muscles responsible for important facial movements including eye closure, smiling, and movements of the lips. Dysfunction of the nerve produces characteristic unilateral facial weakness and asymmetry. Facial rehabilitation based on repeated, controlled movements and sensory-motor feedback may facilitate improved neuromuscular coordination. Bhramari, Sitali, and Sitkari involve coordinated movements of the lips, tongue, oral cavity, and upper airway, while Bhramari additionally incorporates controlled phonation and prolonged expiration. These anatomical and functional features suggest that the

practices may provide repetitive sensory-motor input to orofacial musculature and could have relevance as complementary components of facial motor retraining.

Conclusion: The anatomical relationship between the facial nerve, facial muscles, and orofacial movements provides a basis for considering selected Pranayama practices in facial motor rehabilitation in Adrita. Bhramari, Sitali, and Sitkari may offer complementary sensory-motor stimulation through coordinated orofacial activity. However, their specific effects on facial motor recovery and symmetry require further clinical investigation.

PP-41: Effect of a short-term neti kriya-centred yogic protocol on visual acuity and ocular symptoms a prospective exploratory study

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Karnataka Samskrita University

Aims/Objectives: To explore changes in visual acuity and selected ocular symptoms following a one-month Neti Kriya-centred yogic protocol.

Methods: Ten participants aged 15–65 years with altered eyesight or eye-related symptoms were enrolled in a prospective exploratory study. The intervention was delivered for 30 minutes daily for 10 consecutive days followed by once weekly for three weeks. The session comprised five minutes of warm-up, approximately 10 minutes of Jala Neti and Sutra Neti, 10 minutes of Kapalabhati and Nadi Shodhana Pranayama, and five minutes of Shavasana. Visual acuity was assessed using a Snellen chart, and selected symptoms—dry eyes, teary eyes, itching eyes and blurred vision—were documented before and after the intervention.

Results: The study included three males and seven females. At the group level, the number of participants reporting dry eyes decreased from 1 to 0, teary eyes from 4 to 2, and blurred vision from 4 to 2; itching eyes remained 3 before and after the intervention. The dissertation reports no significant overall change in visual acuity, although a difference was observed in participants with myopia and visual acuity was maintained in other participants with normal acuity.

Conclusion: In this small exploratory sample, the Neti Kriya-centred protocol was associated with improvement in several self-reported ocular symptoms.

PP-42: Gene crossroads understanding OCD and autism through shared genetics

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Background: Obsessive-Compulsive Disorder (OCD) and Autism Spectrum Disorder (ASD) are clinically distinct neuropsychiatric conditions that may share underlying genetic and neurobiological mechanisms. Identifying common genetic factors may provide insights into their convergent molecular pathways.

Objective: This study aimed to investigate shared protein-coding genes between OCD and ASD and characterize their functional interactions using a network-based bioinformatics approach.

Methods: Publicly available genetic association data for Obsessive-Compulsive Disorder (OCD) and Autism Spectrum Disorder (ASD) were obtained from the European Bioinformatics Institute (EBI) GWAS Catalog. OCD- and ASD-associated gene sets were compiled and compared using Venny 2.1 to identify overlapping protein-coding genes. The common genes were subsequently analyzed using the STRING database to construct a protein–protein interaction (PPI) network. Cytoscape and the CytoHubba plugin were used to identify highly connected hub genes based on their degree of association within the PPI network.

Results: The analysis identified 30 common protein-coding genes between OCD and ASD. PPI network analysis highlighted highly connected genes including SHANK3, NRXN1, CNTNAP2, FMR1, GRIN2B, GRIN2A, MECP2, NLGN3, NLGN4X, NLGN1 and GRIA1. These genes are functionally associated with synaptic formation, neurotransmission, synaptic plasticity, neuronal connectivity and neurodevelopment.

Conclusion: This study identified 30 common protein-coding genes shared between ASD and OCD. PPI network analysis revealed several highly connected hub genes involved in synaptic signalling, neurotransmission, synaptic plasticity, brain development and neural circuit assembly. These findings highlight shared molecular mechanisms between ASD and OCD and provide potential targets for further investigation of their overlapping neurobiological pathways.

PP-43: Bridging clinical outcomes and molecular networks an integrative Ayurveda approach to sensorineural hearing loss

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Aims/Objectives: To clinically evaluate the outcomes of multimidal Ayurveda treatment approach in patients with SNHL and integrate the clinical findings with network pharmacology-based molecular analysis to explore potential mechanisms associated with the observed therapeutic response.

Methods: A clinical study was conducted in patients diagnosed with SNHL who received a standardized Ayurveda treatment protocol comprising Marsha Nasya and other appropriate Ayurveda treatment modalities. Clinical assessment was performed before and after treatment using pure-tone audiometry as the principal objective outcome measure, along with relevant subjective and functional hearing parameters. Changes in hearing thresholds and clinical outcomes were systematically assessed to determine the therapeutic response. To complement the clinical findings, network pharmacology analysis was performed to identify bioactive constituents, potential molecular targets and associated biological pathways of the interventions. The identified targets were mapped against processes relevant to auditory function, including oxidative stress, inflammation, neuroprotection, neuronal signaling, vascular regulation and cellular survival. Clinical findings were subsequently interpreted alongside the molecular network to explore potential biological correlates of the observed response.

Results: Clinical evaluation demonstrated changes in auditory outcome measures following the Ayurveda intervention, with corresponding changes observed in the assessed hearing parameters. The network pharmacology analysis identified multiple interconnected targets and pathways associated with oxidative stress regulation, inflammatory modulation, neuronal signaling, cellular survival and vascular processes. Integration of the clinical and molecular findings revealed potential associations between the observed auditory outcomes and the identified molecular mechanisms.

Conclusion: The study provides a clinically anchored integrative framework for evaluating Ayurveda-based management of SNHL. The documented clinical outcomes, supported by network pharmacology-derived molecular associations, provide preliminary mechanistic insights into the therapeutic response and establish a basis for further clinical and experimental investigation.

PP-44: Effect of integrated Ayurvedic therapy on chronic nasal obstruction and sinonasal mucosal changes a case report

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Aims/Objectives: To assess the effect of an integrated Ayurvedic treatment protocol on clinical symptoms of chronic nasal obstruction and Sinonasal mucosal changes in the paranasal sinuses.

Methods: A 26-year-old female patient presented with bilateral nasal obstruction, recurrent sneezing, and running nose for 7–8 years, associated with habitual mouth breathing. Clinical examination revealed mild right-sided deviated nasal septum with left inferior turbinate hypertrophy. NCCT of the paranasal sinuses showed mild mucosal thickening involving the bilateral ethmoid, maxillary, and sphenoid sinuses, suggestive of sinusitis. No concha bullosa was observed. The patient was treated for 35 days with Dashmoola Kwatha 20 mL twice daily on an empty stomach, Mrityunjaya Rasa 2 tablets twice daily, and Pippalyasava 10 mL twice daily after meals. Nasya Karma with Anu Taila was administered in three sittings at 7-day intervals. Clinical assessment was performed before treatment and at follow-up on the 45th day after completion of therapy. Pre- and post-treatment NCCT PNS findings were also compared.

Results: Following completion of treatment, improvement was observed in all major presenting symptoms. The frequency of sneezing and running nose was reduced, while bilateral nasal obstruction was relieved. The patient reported normal nasal breathing with reduction in mouth breathing. Follow-up NCCT PNS demonstrated reduction in mucosal thickening involving the bilateral ethmoid, maxillary, and sphenoid sinuses compared with the pre-treatment scan.

Conclusion: The present case showed improvement in clinical symptoms of chronic nasal obstruction along with corresponding radiological improvement in sinonasal mucosal thickening following an integrated Ayurvedic treatment protocol comprising internal medication and Nasya Karma with Anu Taila. Further controlled clinical studies involving larger sample sizes are warranted to evaluate the reproducibility, efficacy, and safety of this therapeutic approach.

PP-45: Yoga vagus nerve and the gutbrain axis an Ayurvedic and neurophysiological perspective

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Aims/Objectives: This review explores the relationship between the vagus nerve and the gut–brain axis, examines the possible effects of selected Yoga practices on vagally mediated autonomic activity, and interprets these mechanisms from an Ayurvedic perspective.

Methods: A narrative review was undertaken using relevant concepts from Ayurveda, Yoga and contemporary neurophysiology. Literature related to the vagus nerve, gut–brain communication, autonomic regulation, heart-rate variability (HRV), Pranayama and gastrointestinal function was reviewed and integrated with Ayurvedic concepts of Prana Vayu and Apana Vayu.

Results: The review indicates that the vagus nerve plays an important role in bidirectional gut–brain communication and influences gastrointestinal motility and secretion. Slow, controlled breathing may increase vagally mediated HRV and support parasympathetic regulation. Practices such as Nadishodhana, Bhramari and Ujjayi may therefore have potential effects on autonomic function, although evidence for individual practices remains heterogeneous. Meditation and relaxation-based Yoga may additionally influence autonomic regulation through stress reduction. From an Ayurvedic perspective, the functional roles of Prana Vayu and Apana Vayu provide a conceptual framework for understanding the relationship between respiration, mental regulation and gastrointestinal function.

Conclusion: Yoga, particularly controlled slow breathing, may influence vagally mediated autonomic activity and gastrointestinal function. However, direct evidence linking specific Yoga practices with vagal activity, gut microbiota and brain function remains limited. Further research using standardized Yoga protocols, HRV, gastrointestinal outcomes and microbiome assessments is needed.

PP-46: Yoga nidra combined with music therapy for cognitive enhancement a review of stress reduction and memory retention

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Aims/Objectives: Increasing exposure to psychological and lifestyle-related stress may adversely affect sleep, attention, memory, and overall cognitive functioning.Yoga Nidra, a structured yogic relaxation technique, and music-based interventions have independently demonstrated potential for reducing stress and promoting psychological relaxation. However, evidence regarding their combined effects on cognitive functioning remains limited. To review evidence on the effects of Yoga Nidra and music therapy on stress and cognitive functions in young adults and identify research gaps concerning their combined application.

Methods: A narrative literature review was conducted using PubMed, Google Scholar, and PsycINFO. Studies evaluating Yoga Nidra, passive sound/music therapy, stress biomarkers such as heart rate variability, and cognitive measures of memory, attention, and executive functions were considered.

Results: Available evidence suggests that Yoga Nidra and music-based interventions may downregulate the sympathetic “fight-or-flight” response, reduce pulse rate and mental fatigue, and support attention and cognitive performance. Music may also facilitate brain-wave entrainment, guiding the brain from high-stress Beta activity toward relaxed Alpha and Theta states.

Conclusion: Despite promising individual benefits, structured evidence on integrating music directly into Yoga Nidra scripts is scarce, particularly regarding whether it produces faster or deeper relaxation than voice alone. Existing studies also rely largely on psychological questionnaires rather than objective cognitive and physiological measures. Comparative studies evaluating Yoga Nidra alone, Yoga Nidra with music, and control conditions are warranted. Keywords: Yoga Nidra; Music Therapy; Cognitive Enhancement; Young Adults.

PP-47: Feasibility testing of a web-based karma Yoga self-guided intervention for well-being of telephone counsellors

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Dr. Naveen Kumar C, Professor
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Aims/Objectives: To outline the adaptation and feasibility of a Web-based Karma Yoga self-guided intervention to enhance the well-being of telephone counselors

Methods: The current study is part of an ongoing Randomized Waitlisted Controlled Trial (RCT) comprising three phases—the first phase of intervention adaptation based on the Bhagavad Gita and previously validated studies. The second phase involves the digitization of a 6-week intervention using Research Electronic Data Capture (REDCap) tools and refinement through pre-pilot testing (n=12). The third stage is pilot testing (n-5) after randomization: 3 in the intervention group and 2 in the waitlisted control group. Pre- and post-assessments were conducted using PROQOL-5, SWEWBS, and Karma Yoga scale.

Results: Based on the Bowen Model feasibility checklist, suggest moderate acceptability, with usefulness, helpfulness, and willingness to continue, rated at 3.6 out of 5. Moderate demand was observed, with an engagement rate of 79% and a retention rate of 71%. The descriptive statistics show Median scores are upward for compassion satisfaction, well-being for both groups, downward for burnout, mixed trends for secondary traumatic stress, and upward direction for Manonigraha, Samabudhi, Phala Tyaga, Svadharma, and Lokasangraha for the intervention group, suggesting a moderate level of efficacy

Conclusion: In conclusion, a web-based Karma Yoga self-guided program demonstrates that applying Karma Yoga principles is feasible

PP-48: Role of nidra in neurological health and disorders an Ayurvedic approach to sleep-promoting therapies

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Aims/Objectives: To explore the role of Nidra in neurological health and disorders through Ayurvedic and contemporary neuroscientific perspectives. Objectives 1.To review the Ayurvedic concept and physiological importance of Nidra. 2.To understand the relevance of glymphatic clearance, neuroinflammation, cognition, and circadian regulation. 3.To explore Ayurvedic therapeutic approaches for promoting healthy and restorative Nidra in neurological health and disorders.

Materials and Methods

A narrative review was conducted using classical Ayurvedic texts and contemporary biomedical literature. PubMed and other databases were searched using keywords related to Nidra, sleep, neurological disorders, glymphatic system, neuroinflammation, cognition, and circadian rhythm. Relevant reviews and mechanistic studies were identified and thematically synthesized.

Results:

The literature indicates a bidirectional relationship between sleep and neurological disorders, with disturbances commonly reported in epilepsy, migraine, stroke, Parkinson's disease, Alzheimer's disease, and multiple sclerosis. Adequate sleep supports cognition, synaptic regulation, circadian rhythm, and brain metabolic clearance, while sleep disruption may contribute to fatigue, cognitive dysfunction, and neuroinflammation. The glymphatic system provides a potential link between sleep and brain waste clearance. Ayurvedic approaches including Dinacharya, appropriate Ahara, Abhyanga, Padabhyanga, Shirodhara, Nasya, and selected Medhya Rasayana and Nidra-promoting formulations may support healthy sleep and well-being, although their neurological benefits require further clinical validation.

Conclusion: Nidra is an important physiological component of neurological health, contributing to cognitive function, neural homeostasis, metabolic clearance, and overall well-being. The reviewed evidence suggests a bidirectional relationship between disturbed sleep and neurological disorders. Ayurvedic approaches such as Dinacharya, appropriate Ahara, Abhyanga, Padabhyanga, Shirodhara, Nasya, and selected Medhya Rasayana and Nidra-promoting interventions may have potential in promoting healthy sleep and supporting neurological well-being. Integrating these approaches with contemporary sleep science may provide a holistic framework for neurological care. However, robust clinical studies are required to establish their efficacy and safety in specific neurological disorders.

PP-49: Changes in psychological and autonomic stress regulation following a comprehensive Yoga-based lifestyle programme a single-group prepost study

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Aims/Objectives: Assessing physiological responses to experimental stress alongside psychological outcomes may provide a more comprehensive understanding of stress regulation following yoga. This study examined changes in autonomic stress reactivity and recovery as primary outcomes, and psychological regulation as secondary outcomes, following a one-month comprehensive yoga-based lifestyle programme.

Methods: Thirty-five healthy adults aged 18–40 years attending a residential Yoga Instructor Course were selected based on the inclusion and exclusion criteria. They participated in a four-week comprehensive yoga-based lifestyle programme comprising yogic postures, breathing practices, meditation, relaxation, a structured vegetarian diet, and yoga philosophy sessions. This single-group pre–post study assessed autonomic reactivity and recovery by measuring heart rate (HR) and galvanic skin response (GSR) before, during, and after a cognitive task (mental stressor) and an isometric handgrip task (physical stressor). Autonomic reactivity and recovery were then compared between assessments conducted before and after the one-month yoga-based lifestyle programme. Secondary outcomes were assessed using psychological questionnaires, including perceived stress reactivity, emotional reactivity, resilience and impulsivity.

Results: After one month of intervention, heart-rate reactivity decreased numerically during mental stress (4.64 ± 5.93 to 2.79 ± 5.38 beats/min; $p = .063$) and physical stress (1.98 ± 6.76 to 1.04 ± 5.36 beats/min; $p = .435$). GSR reactivity also decreased numerically during both tasks, while the GSR recovery index increased, although these changes were not statistically significant. We observed significant changes in related psychological assessments. Perceived stress reactivity and emotional reactivity decreased (both $p < .001$), resilience increased ($p = .002$), and global impulsivity decreased ($p = .006$).

Conclusion: Psychological regulation of stress improved after the programme, with limited evidence of autonomic physiological changes. Controlled studies are needed to clarify these findings further.

PP-50: A multi-modal integrative approach to the management of sciatica with- a case report

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Aims/Objectives: Sciatica is a common cause of chronic low back pain with radiation to the lower limbs and may significantly impair mobility and daily activities. In Ayurveda, sciatica can be correlated with Gridhrasi, predominantly associated with Vata Dosha. Ayurvedic management focuses on Vata alleviation through external therapies and internal medicines, along with Pathya Ahara–Vihara. Integrated approach provide a broader strategy for symptom management and improvement in functional ability. This case highlights the application of an integrated Ayurveda and Yoga protocol.

Objective:To evaluate the clinical response to an integrated Ayurveda and Yoga protocol in chronic sciatica, focusing on reduction of pain and improvement in mobility, functional ability and activities of daily living.

Methods: A male patient with a five-year history of low back pain radiating to both lower limbs, with greater involvement of the left leg, was admitted for a 21-day multidisciplinary intervention. The integrated protocol included hydrotherapy, mud therapy, massage therapies, diet therapy, physiotherapy, acupuncture, yoga and breathing exercises, aromatherapy and chromotherapy. Ayurvedic interventions included Matra Basti, Niruha Basti, Kati Bandhana, various Swedana procedures, Nasya and external applications. Ayurveda oral medications and dietary and lifestyle modifications were also incorporated. Clinical improvement and functional ability were assessed during the hospital stay.

Results: Following the structured multimodal intervention, the patient was documented as improved functional ability and quality of life at discharge. The treatment programme showed reduction of pain and improvement in the ability to walk, stand, reduction in Oswestry scale and perform daily activities independently and with greater ease. Individualized diet, lifestyle, yoga and follow-up recommendations were provided for continued management.

Conclusion: This case demonstrates the potential of an integrated Ayurveda, Naturopathy, Yoga framework for the comprehensive management of chronic sciatica. The observed clinical improvement supports the need for systematically designed clinical approach incorporating objective outcome measures, standardized protocols and reproducibility of such integrative interventions.

PP-51: From dry eyes to functional recovery Ayurvedic management of secondary Sjgrens syndrome associated with rheumatoid arthritisa case study

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Aims/Objectives: To evaluate the clinical response of an Ayurvedic therapeutic approach in a patient with seropositive rheumatoid arthritis (RA) associated with secondary Sjögren's syndrome, with emphasis on joint manifestations and sicca symptoms.

Methods: A 35-year-old female with a 10-year history of polyarticular pain and swelling, 1½ years of generalized burning sensation, and 3 months of ocular, oral, and throat dryness was evaluated. She had previously been diagnosed with seropositive RA and secondary Sjögren's syndrome. Investigations revealed positive rheumatoid factor, anti-CCP and ANA, elevated ESR (60 mm/hr), CRP (3.20 mg/L), and abnormal sicca assessment. From an Ayurvedic perspective, the presentation was interpreted as Āmavāta associated with Śuṣkākṣipāka and Udakavaha Srotoduṣṭi. Management included Āmapācana, Agnidīpana, Vātānulomana and Srotoviśodhana using Gandharvahastādi Eraṇḍa Taila, Rasna Eraṇḍādi Kaṣāya, Simhanāda Guggulu, Ajamodādi Cūrṇa, Rasapācaka Cūrṇa, Cūrṇa Piṇḍa Sveda and Erandamūlādi Kṣāra Basti, followed by supportive oral and external therapies for over a period of 6 months.

Results: The patient demonstrated progressive improvement in joint pain, swelling, stiffness, ocular burning, photophobia, fatigue, and dryness of the eyes, mouth and throat. Appetite, sleep and daily functioning also improved. The VAS pain score decreased from 8/10 to 4/10 during inpatient management. One episode of increased ocular burning associated with Śuṇṭhī Svarasa resolved after its discontinuation. No other significant adverse events were reported.

Conclusion: This case suggests that an Ayurvedic multimodal approach targeting Āma, Agnimāndya, Vāta-prakopa, Srotorodha and Rukṣatā may contribute to improvement in Multiple Indexes to ascertain the prognosis of musculoskeletal and sicca-related manifestations of secondary Sjögren's syndrome associated with RA. However, as a single-patient case report, the findings cannot establish efficacy or causality. Larger controlled studies with standardized interventions and validated outcome measures are required.

PP-52: An integrated management of benign paroxysmal positional vertigo with special reference to bhrama a case report

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Aims/Objectives: To evaluate the effectiveness of an integrated Ayurveda treatment protocol along with Epley's manoeuvre in managing BPPV and reducing recurrence.

Methods: A 37-year-old female from Bengaluru presented with complaints of dizziness while bending down for six months, associated with swaying sensation and occasional bowel urgency. Symptoms were aggravated by travel and sleeplessness. The patient had no history of DM or HTN. Clinical examination revealed positive Romberg, Sharpened Romberg, Gait test, and Dix–Hallpike test (right ear). Based on Ayurveda assessment, Ratri Jagarana and Yana leading to Vata Prakopa was identified as the primary Nidana. The treatment protocol included Sadyovirechana with Eranda Taila (40 ml on the first day), Marsha Nasya with Maha Masha Taila (8 Bindu), Mukhabhyanga with Ksheerabala Taila, internal medications such as Ashwagandha Ghrita and Tablet Bravobol Forte at bedtime. Epley's manoeuvre was performed once weekly for four consecutive weeks. Assessment was done using Dix–Hallpike test, Dizziness Handicap Inventory (DHI), and Vertigo Symptom Scale–Short Form (VSS-SF).

Results: Post-treatment, Dix–Hallpike test converted from positive to negative. DHI scores and VSS-SF scores reduced to mild grading of severity, indicating significant symptomatic improvement. The patient reported reduced frequency and severity of dizziness with minimal recurrence during follow-up.

Conclusion: The integrated approach combining Ayurveda therapies targeting Vata Prakopa with vestibular rehabilitation (Epley's manoeuvre) proved effective in managing BPPV. This case highlights the potential of holistic management in reducing symptoms and preventing recurrence, thereby improving patient quality of life.

PP-53: A multidimensional Ayurvedic approach to the management of sciatica a case report

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Aims/Objectives: To evaluate the clinical response of an individualized, multimodal Ayurvedic approach in reducing pain and stiffness and improving functional mobility in Gridhrasi (sciatica).

Methods: A 55-year-old female presented with low back pain radiating to both lower limbs, with greater involvement of the left side, associated with bilateral knee pain, morning stiffness, and difficulty in movements, particularly while getting up from bed and sitting. She had previously consulted another hospital and experienced temporary relief with medication, but the symptoms recurred after discontinuation of treatment. Based on the clinical presentation, an individualized Ayurvedic treatment protocol was administered. The treatment included Nadi Sweda, Mridu Abhyanga, Rajayapana Basti, Matra Basti, Niruha Basti, Jambeera Pinda Swedana (JPS), Choorna Pinda Swedana (CPS), Kati Pichu, and Shamana Aushadhis. Dietary and lifestyle advice was also provided. Clinical progress was assessed through changes in pain, stiffness, mobility, and ability to perform routine activities

Results: Following the treatment, the patient experienced slight reduction in pain and stiffness was observed following treatment. The patient reported some ease in walking, standing, and sitting, while difficulty in getting up from a sitting position and performing certain movements persisted.

Conclusion: In this case, an individualized Ayurvedic approach showed some improvement in pain, stiffness, and mobility in a patient with Gridhrasi. The use of therapies such as Swedana, Abhyanga, Basti, local therapies, and Shamana Aushadhis, along with dietary and lifestyle advice, offered a personalized approach based on the patient's clinical presentation. Although the improvement was not complete, the observed changes suggest that individualized Ayurvedic management may have a role in addressing the symptoms and functional difficulties associated ***with Gridhrasi. Further clinical studies with*** standardized assessment tools are needed to understand its effectiveness more clearly.

PP-54: An integrative approach to pakshaghata a case study

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Aims/Objectives: To assess the clinical improvement following an integrative treatment approach combining Ayurveda, Physiotherapy and Yoga in an elderly patient diagnosed with CVA (Pakshaghata).

Methods: A 73-year-old patient presented with weakness of the right upper and lower limbs, inability to walk independently, reduced muscle power, excessive speech, and marked dependence on activities of daily living. The patient was diagnosed with CVA, clinically correlated with Pakshaghata. An individualized Ayurvedic treatment protocol was administered along with structured physiotherapy and yoga. The patient\'s functional status, mobility, muscle strength, communication, and ability to perform ADLs were assessed periodically over a one-month treatment period.

Results: Following one month of combined Ayurvedic treatment with physiotherapy and yoga, appreciable functional improvement was observed. The patient progressed from being unable to walk independently to walking with support. The patient was able to consume food independently, demonstrating improved functional autonomy. Overall, dependence on caregivers for daily activities was reduced.

Conclusion: This case highlights the potential value of an integrative approach in post-stroke care. The combined intervention was associated with improvements in mobility, functional independence, and communication within one month. The combination of both approaches provided a multidimensional strategy. Integrative care may help reduce caregiver dependence and support the patient\'s quality of life and reintegration into daily activities.

PP-55: Effect of Ayurveda management on cognitive changes related to type-2 diabetes mellitus an observational study

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Aims/Objectives: Diabetes patients have been reported to hold a higher incidence of cognitive decline and AD; Type 2 DM has been strongly associated with an increased risk of developing all types of dementia, including AD. Type 2 DM has shown to have strong association with the risk of developing cognitive impairment. Studies have found decrease in hippocampal size are correlated to HbA1C levels, suggesting that HbA1C could be used to indicate hippocampal function and/or the onset of memory loss in Type 2 DM patients The description of Apathyanimittaja Prameha in Sushruta Samhita is very similar to that of Type 2 DM. Although the classical texts do not explicitly link diabetes and cognition, it can be inferred that diabetes leads to Ojokshaya and Dhatu Kshaya, particularly of Majja and Medo Dhatu, which are considered integral to cognitive function. This depletion may contribute to changes in cognitive status. The major focus of biomedical treatment for Type 2 DM is lowering the hyperglycaemia, on the other hand, Ayurveda adopts a personalized approach in the treatment of Prameha, taking into account the type of Prameha based on dosha predominance, its causative factors (Nidana), and the prognosis (Sadhyasadhyata) of the disease, not single molecule-based approach.

Methods: Cognitive assessment Blood investigation MRI Ayurveda intervention
Results: The study has just started, it is a conceptual study

Conclusion: This study aims to assess the effects of Whole-System Ayurveda treatment on Type 2 Diabetes Mellitus and associated cognitive decline using global assessment tools, including cognitive tests, psychological questionnaires, fMRI, and Ayurvedic parameters. Findings may offer insights for effective, sustainable management of Type 2 DM and related complications.

PP-56: A non-invasive Ayurvedic management of CSOM

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Aims/Objectives: To evaluate non-invasive Ayurveda management of perforated tympanic membrane in CSOM-associated with Karnasrava using Karnapichu and oral medication.
Methods: A female patient diagnosed with case of CSOM was given with Seven days of both local And Systemic Ayurveda treatment. The treatment comprised of Karnapichu externally and Internal Ayurvedic medication, formulation chosen based on pathological stage. No surgical or invasive procedures were employed during the course.

Results: After one day of treatment, the infection had nearly resolved with minimal discharge; by day 2, discharge was nil and symptoms reduced markedly; the tympanic membrane healed completely by subsequent follow up, with no recurrence during follow-up. The procedure was well-tolerated, with no adverse effects reported.

Conclusion: This case demonstrates that non-invasive Ayurvedic management can yield rapid, effective outcomes in CSOM with tympanic membrane perforation, positioning it as a safe and supportive alternative. Further studies are warranted to validate these findings.

PP-57: A clinical study on the therapeutic effect of keshamasi anjana in the management of shushkakshipaka dry eye syndrome

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Aims/Objectives: To evaluate the effect of Keshamasi Anjana in the management of Shushkakshipaka (Dry Eye Syndrome).

Methods: A standard questionnaire was prepared and circulated among the students and working faculty of Sri Sri College of Ayurvedic Science and Research Hospital, Bangalore. Out of 50 respondents, 15 patients were selected through random sampling for clinical evaluation. Subjects having classical signs and symptoms of Shushkakshipaka were selected from the OPD of Shalakya Tantra department, Sri Sri College of Ayurvedic Science and Research Hospital, Bangalore. Scores were awarded according to the severity of the condition and assessment was done based on the relief in the symptoms after the treatment. The subjects were allocated for Keshamasi Anjana, given for 15 consecutive days 2 times a day with follow up after 7th day and 15th

day.

Results: Marked Relief in symptoms like Gharsha, Avila Darshana, Daha, Toda and Vishushkata was obtained after Keshamasi Anjana Application.

Conclusion: Satisfactory result was observed after Keshamasi Anjana application in the form of improvement in all the chief complaints of Shushkakshipaka.

PP-58: Integrative approach to oral lichen planus a case study on sarvasara mukharoga

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Aims/Objectives: To document and analyze the clinical presentation and progression of Sannipataja Mukhapaka with special reference to OLP To evaluate the effectiveness of an integrative management approach, combining Ayurveda with modern medicine, for OLP To reduce the recurrence of oral lichen planus (OLP) and achieve sustained remission of symptoms

Methods: A 45-year-old female from Meghalaya presented with a persistent whitish lesion over the dorsum of the tongue for 4 years, aggravated over the last 2 years, accompanied by burning sensation, cutting type of pain, and difficulty in swallowing. Previous treatments yielded inadequate relief. An integrative therapeutic plan was introduced, incorporating laser therapy on alternate days for three sessions, and topical application of corticosteroids. Ayurveda protocols included Kavala, oral medications and Pratisarana over the lesion. Clinical response was assessed based on reduction in pain, burning sensation, and lesion size.

Results: By the end of combined therapy, the patient reported marked relief in the symptoms with visible regression in the whitish lesion. No adverse reactions were observed. Follow-up after 5 months showed sustained improvement without recurrence.

Conclusion: The integrative approach combining laser therapy, topical corticosteroids, and Ayurveda interventions was effective in reducing symptoms and lesion severity in chronic oral lichen planus. This case highlights the potential of integrative therapy to enhance mucosal healing and improve patient outcomes in resistant OLP cases.

PP-59: An integrative approach to lumbar spondylolisthesisa case study

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Aims/Objectives: Introduction Lumbar spondylolisthesis is a condition characterized by the forward displacement of one vertebral body over the veretebral below it,most commonly occurring at the L4-L5or L5-S1 levels of the lumbar spine. This vertebral slippage may leads to mechanical instability of the spine,causing low back pain ,stiffness,restricted movements,and in some case radicular sympotoms due to nerve root compression.

Objective To assess the clinical improvement following an intergrative treatment approach combining Ayurveda and physiotherapy in reducing pain and stiffness and improving functional ability and gait in a patient with lumbar spondylolisthesis.

Methodology A 42-year-old female patient presented with low backache radiating to the right lower limb for 2 years,difficulty in walking ,reduced muscle power which had aggravated over the preceding 2 months.the patient diagnosed with lumbar spondylolithesis,clinically it can be correlated with vataja gridhrasi.an Ayurvedic interventions: like abhyanga ,dhara, lepa,katibasti,Bandhana and Basti, and internal Ayurvedic medications along with Rasayana individualized and administered along with physiotherapy.

Result Following the combined ayurvedic treatment and physiotherapy patient showed reduction in low back pain and stiffness, along with improvement in functional ability. Improvement in gait and overall mobility was also observed.

Conclusion The present case suggests that an integrative approach may be beneficial in the symptomatic management of lumbar spondylolisthesis by reducing pain and stiffness and improving functional mobility.

PP-60: Panchakarma a comprehensive approach to pakshaghata management

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Aims/Objectives: panchakarma, a ray of hope in pakshaghata- a case study

Methods: A 52yr old male patient who is not a known case of hypertension and newly diagnosed case of diabetes mellitus presented with loss of strength in left half of the body since 10days was diagnosed as Kaphavaranajanya Pakshaghata and

was treated with agnilepa, Vacha shunti Avapeedaka Nasya and Dashamula niruha basti for 17days in total.

Results: There was a remarkable improvement in the Barthel index, which improved from 30 to 95, along with significant radiological changes.

Conclusion: Pakshaghata can occur due to margaavarana or dhatukshaya. Vatakaphaja lakshana were predominantly seen in this case and hence treated with Agnilepa, Nasya and Basti with a view to remove the kaphavarana and pacify the kupita vata. Pakshaghata chikitsa depends on the dosha, vyaadhi avastha and the samprapti involved. As vatavyadhi are kruchrasadhya or asadhya in nature, they require long term treatment. But in this case, with a single course of agnilepa, Nasya and Basti tremendous result was seen. Along with symptomatic relief, radiological changes were also noted.

PP-61: Mind-body preparation for radiotherapy an 8-week telehealth Yoga breathing programme in a post-mastectomy patient with treatment-related anxiety

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Aims/Objectives: To evaluate whether a structured telehealth yoga program built around sectional breathing (Vibhagiya Pranayama) could improve breath-hold capacity and psychological readiness for DIBH in a post-mastectomy patient.

Background: Patients awaiting Deep Inspiration Breath-Hold (DIBH) radiotherapy after mastectomy face a dual challenge: a physical demand (a steady 20–45-second breath-hold) and a psychological one (anxiety, poor sleep, and loss of body confidence after surgery). Conventional DIBH coaching addresses the former; yoga-based breathing, which integrates respiratory training with attentional and vagal regulation, may address both.

Methods: Single case, reported per CARE guidelines. A 52-year-old woman with recurrent breast cancer, one month after mastectomy with flap reconstruction, undertook an 8-week tele-yoga programme (5–6 supervised 60-minute videoconference sessions weekly, plus twice-daily audio-guided home practice) before radiotherapy. The protocol progressed from chair-based to supine practice and combined joint-loosening exercises, staged abdominal–thoracic–clavicular breathing with gradually lengthened breath retention, supportive props, and mantra meditation. Outcomes were weekly breath-holding time and self-reported sleep latency, anxiety, and

confidence.

Results: Breath-holding time rose from 16 seconds to 56–58 seconds over 8 weeks, sustained across 5–9 consecutive cycles, comfortably above the DIBH threshold. Sleep latency fell from 1–2 hours to near-normal. The patient reported reduced anticipatory anxiety, greater confidence in performing DIBH, and improved acceptance of body-image changes and subsequently adhered to DIBH throughout radiotherapy.

Conclusion: A telehealth yoga breathing programme was feasible and delivered concurrent respiratory and psychological gains before DIBH radiotherapy, illustrating how yoga can be integrated into modern oncology care. Controlled trials with validated anxiety and sleep measures are needed.

PP-62: From yakritodara to recovery an Ayurvedic approach to alcoholic liver disease with ascites a case report

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Aims/Objectives: To evaluate the clinical improvement in Yakritodara following Ayurvedic management, with emphasis on reduction of abdominal distension, pedal oedema, jaundice and improvement in relevant laboratory parameters.

Methods: A single case of a 23-year-old male with a 7-year history of alcohol consumption presented with abdominal distension for 1½ months, yellowish discoloration of eyes for 4 months and bilateral pedal oedema for 1 week. Examination revealed icterus, bilateral pitting pedal oedema, marked abdominal distension, fluid thrill and shifting dullness. The case was diagnosed as Yakritodara with Alcoholic Liver Disease and Ascites. Ayurvedic management included Trivrit Lehya, Gomutra Haritaki, Arogyavardhini Vati, Amlycure DS, herbal swarasa, Simhanada Guggulu, Ajamodadi Churna and Vardhamana Pippali Rasayana, along with Pathya-Apathya. Abdominal girth, oedema, body weight and laboratory parameters were monitored.

Results: Following treatment, pedal oedema was completely reduced and abdominal distension improved. Abdominal girth at the umbilicus reduced from 83 cm to approximately 75 cm. Total bilirubin decreased from 13.2 to 3.8 mg/dL, direct bilirubin from 9.9 to 1.8 mg/dL, alkaline phosphatase from 193 to 102 U/L and SGOT from 122 to 44 U/L. Haemoglobin increased from 9.3 to 10.3 g/dL and ESR decreased from 90 to 70 mm/hr. Body pain and knee joint pain also reduced.

Conclusion: The case demonstrated clinical and

laboratory improvement following individualized Ayurvedic management of Yakritodara associated with Alcoholic Liver Disease and Ascites. Reduction in abdominal girth and pedal oedema, together with improvement in biochemical parameters, was observed during treatment and follow-up. Further systematic clinical studies are required to establish the efficacy of this approach.

PP-63: Computationally guided optimization and neuropharmacological evaluation of polyphenols as dual cholinesterase inhibitors for the treatment of Alzheimers disease

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Aims/Objectives: Alzheimer's disease (AD) is a complex neurodegenerative disorder affecting mental ability and neurocognitive functions. Cholinergic dysfunction due to acetylcholine (ACh) deficiency contributes to cognitive deficits associated with AD. Considerable efforts have been made to discover cholinesterase (ChE) inhibitors; however, no scaffold with dual cholinesterase inhibitory activity has yet been established to combat AD.

Methods: The present study aimed to computationally identify and investigate natural polyphenols as potential dual cholinesterase inhibitors using an integrated computational and neuropharmacological screening approach. A total of 151 polyphenols were subjected to structure-based molecular docking using Glide against acetylcholinesterase (AChE) and butyrylcholinesterase (BChE). Based on docking performance, binding-site interactions, and CNS-relevant characteristics, five compounds that successfully met all screening criteria were subjected to 100-ns molecular dynamics (MD) simulations. Epigallocatechin and ellagic acid emerged as the most promising dual-target candidates, exhibiting good stability and thermodynamic behavior, supported by binding free-energy calculations. These compounds were further evaluated for in vitro anticholinesterase activity and in vivo neuropharmacological effects.
Results: Docking poses were evaluated against experimentally reported binding-site residues to verify biologically plausible interactions within the cholinesterase gorge. Ligand RMSD analysis further demonstrated that epigallocatechin and ellagic acid remained associated with their respective binding pockets. Ellagic acid showed stronger predicted binding to AChE, whereas epigallocatechin demonstrated a stronger preference for BChE. Both compounds showed no signs of acute oral toxicity in rats. In neuropharmacological screening, they significantly reversed scopolamine-induced memory deficits and improved learning and memory retention in exteroceptive behavioral

models. Pretreatment restored scopolamine- and aging-associated alterations in brain AChE, lipid peroxidation, and reduced glutathione levels. Histopathological and neurochemical analyses further indicated attenuation of scopolamine-induced neuronal tissue damage.

Conclusion: These findings suggest that epigallocatechin and ellagic acid possess neuroprotective properties and ameliorate cognitive dysfunction, supporting their further exploration as potential neurotherapeutic agents for AD.

PP-64: Ayurvedic rasayana and healthy brain ageing a preventive perspective

Sruthy Nair, *Faculty, IIAMR*

Aims/Objectives: To explore the concept of Rasayana in Ayurveda in relation to contemporary understanding of healthy brain ageing and to identify potential preventive pathways for maintaining cognitive health during ageing.

Methods: A narrative conceptual review was conducted using classical Ayurvedic literature and contemporary scientific literature related to healthy ageing, cognitive decline, neuroprotection, oxidative stress, inflammation, metabolic health and lifestyle-related risk factors. Ayurvedic concepts including Rasayana, Medhya Rasayana, Ojas, Agni, Dinacharya and Sadvritta were examined in relation to contemporary determinants of brain health and cognitive ageing.

Results: The review identified several potential areas of convergence between Ayurvedic Rasayana principles and contemporary approaches to healthy brain ageing. Rasayana emphasizes longevity, preservation of physiological functions and maintenance of overall well-being, while Medhya Rasayana is traditionally associated with cognitive functions. Dietary regulation, maintenance of Agni, adequate sleep, physical activity, mental discipline and healthy daily routines may correspond with contemporary preventive approaches targeting metabolic health, chronic inflammation, oxidative stress, vascular health and neuroplasticity. However, direct equivalence between Ayurvedic constructs and specific biological mechanisms cannot presently be established, highlighting the need for systematic scientific validation.

Conclusion: Ayurvedic Rasayana offers a potentially valuable preventive framework for healthy brain ageing through its emphasis on longevity, cognitive well-being, lifestyle regulation and individualized health maintenance. Future interdisciplinary research integrating Ayurvedic assessment with validated cognitive measures, neurophysiological parameters and relevant biomarkers may help establish the potential role of Rasayana-based approaches in promoting healthy cognitive ageing.

PP-65: Reinterpreting samskara a proposed neurobiological framework for experience-dependent memory emotion and behavioural patterns and their potential modulation through yogic practices

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Aims/Objectives: To develop a conceptual neurobiological framework relating selected dimensions of Saṃskāra to established mechanisms of memory, emotional learning, schema formation, habit learning, memory engrams, reconsolidation and experience-dependent neural plasticity.

Methods: A conceptual synthesis was undertaken integrating classical Yoga sources concerning saṃskāra, smṛti, vāsanā and karmāśaya with contemporary literature on emotional memory, cognitive schemas, cortico-basal-ganglia circuitry, memory engrams, reconsolidation, neuroplasticity and epigenetic regulation. Evidence from yoga and meditation research was considered separately from established neurobiological evidence.

Results: The synthesis generated a proposed cross-domain framework in which emotional, cognitive and motor-habitual manifestations of Saṃskāra correspond to interacting experience-dependent neural representations. Memory engrams are proposed as potential cellular-level components rather than equivalents of Saṃskāra, while reconsolidation provides a potential mechanism for modification of established patterns. Epigenetic regulation is proposed as a potential contributor to persistence. The karmic dimension was retained as a conceptual boundary because no established biological counterpart was identified.

Conclusion: Saṃskāra may serve as a higher-order conceptual framework integrating persistent emotional, cognitive and behavioural consequences of experience. The proposed model provides testable hypotheses for investigating whether yogic practices influence predefined neural, behavioural and molecular correlates of such persistent patterns, while distinguishing established evidence from conceptual correspondence and hypothesis.

PP-66: Siddha therapeutic management for developmental delay in children a case series study

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Aims/Objectives: The main objective of this study is to evaluate the efficacy of Siddha Therapeutic Management for Developmental Delay in Children Methods: A case series study was conducted between Jan 2023 – Dec 2023 in Out Patient Department of Kuzhanthai Maruthuvam (Pediatric) at JSA Medical College for Siddha and Research Centre, Ulundurpettai, Kallakuruchi District. Data were collected by interviewing the respondents with a pre-designed schedule. Developmental status was assessed using Trivandrum. We have treated both internal medicine and external therapies. This article mainly focused on external therapies. The external therapies are Varmam, Thokkanam, Podithimirthal, Ennai Ooral, Ennai Ozhuku and Nasiyam. These therapies are continuously given by time interval period.

Results: 10 children have complaint of poor head control, difficult to sit, Difficult to stand and Difficult to walk. After the treatment 7 children get well head control. 5 children are able to sit without support. 4 children are able stand with support. 2 children able to walk with support. Internal medicine are used to neurobehavioral changes and increased enhancing the nerve impulse transmission. External therapies are used to regulate the derangement of Vatham, Pitham and Kabam.

Conclusion: Children's are treated both internal medicine and external therapies. This may work by regulating the neuro transmitter flow, synaptic transmission and signal pathways. It will improve blood circulation and give strengthens the nerves and the muscles. In this study the Siddha therapeutic management was giving a possible improvement of the children and improves their quality of life

PP-67: An integrative approach to the management of post-stroke hemiparesis a case series

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Aims/Objectives: Stroke is a major cause of long-term neurological disability, with persistent hemiparesis, impaired mobility, and limitations in activities of daily living (ADL). In Ayurveda, post-stroke hemiparesis may be clinically correlated with Pakshaghata, a predominantly Vata-related disorder characterized by impaired motor function and unilateral weakness. This case series describes functional outcomes following an integrative Ayurveda and Yoga-based rehabilitation approach in patients with post-ischemic stroke hemiparesis.

Methods: Five patients (three males and two females), aged 63–78 years, with persistent hemiparesis following ischemic stroke were included. All patients were clinically stable following the acute phase, with varying degrees of impairment in ambulation and ADL. Functional status was assessed before and after intervention using the Functional Ambulation Profile (FAP) and Barthel Index. The integrative protocol included Ayurvedic therapies and individualized Yoga practices. Ayurvedic management initially involved Rukshana-based therapy, followed by Snigdha Vatahara management. Two courses of Yoga Basti were administered, along with individualized Shamana medicines. One-to-one Yoga practices were tailored to each patient's clinical presentation and functional capacity.

Results: Improvement in functional ambulation and functional independence was observed following the intervention. FAP scores improved from a baseline range of 20%–85% to 56%–100%. Barthel Index scores improved from 10%–80% at baseline to 20%–100% following intervention. The observed changes indicated varying degrees of improvement in ambulation and ADL across the five cases.

Conclusion: Patients with persistent post-ischemic stroke hemiparesis demonstrated improvement in functional ambulation and independence following an integrative rehabilitation approach incorporating Ayurveda and individualized Yoga therapy. These findings support the feasibility of integrating these approaches into multidisciplinary post-stroke rehabilitation. However, the small sample size and absence of a comparator group preclude causal conclusions. Prospective controlled studies are warranted to further evaluate this approach.

PP-68: Schizophrenia exploring an integrative approach with pharmacotherapy Yoga and music therapy

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Aims/Objectives: To explore the potential role of yoga and music therapy as adjunctive interventions alongside pharmacotherapy in improving symptom control, psychological wellbeing, social functioning and quality of life in individuals with schizophrenia. From the perspective of naturopathy, when complete cure is not possible, an important therapeutic objective is to reduce suffering, improve comfort, and support the individual's overall quality of life.

Methods: An evidence-informed narrative review was undertaken using published clinical studies, systematic reviews and established recommendations concerning pharmacotherapy, yoga and music therapy has positive congitive effects in schizophrenia separately

Results: Evidence indicates that antipsychotic medication is effective for controlling core psychotic symptoms and should remain an essential component of treatment. Yoga, when used as an adjunct, has demonstrated potential benefits in negative symptoms, quality of life and social functioning. Music therapy added to standard care has also shown potential benefits in clinical and psychosocial outcomes, particularly as a supportive intervention. An integrative model may therefore address both symptom control and broader functional wellbeing.

Conclusion: An integrative approach combining pharmacotherapy with structured yoga and music therapy may provide a holistic framework for schizophrenia management. These interventions should complement, rather than replace, prescribed treatment, with medication optimization undertaken only through individualized clinical assessment and specialist supervision.

PP-69: Role of Ayurveda in public health and healthy living

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Aims/Objectives: The aim of this abstract is to understand how simple and safe Ayurvedic practices can help prevent diseases and promote healthy living in the community

Methods: Information from available studies and literature about Ayurveda, healthy food, yoga, meditation, exercise, and daily healthy routines was reviewed. Their possible benefits for public health were considered.

Results: Healthy food, regular exercise, yoga, meditation, proper sleep, and good daily habits can

support physical and mental well-being. When safe and scientifically supported Ayurvedic practices are used along with modern healthcare, they may improve awareness about disease prevention and encourage people to follow healthier lifestyles.
Conclusion: Ayurveda can play a useful role in public health when its practices are supported by scientific evidence and used safely. Combining useful Ayurvedic practices with modern healthcare may help people make healthier choices and build healthier communities.

PP-70: Sadvrittaneurobehavioural integration a mechanistic model derived from aga hdaya towards sustainable living

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Aims/Objectives: This study aims to operationalize the sadvritta prescription of Ashtanga Hrdaya as a testable neurobehavioural framework for psychological well-being and sustainable living, and to provide a translational model for modern preventive healthcare.

Methods: A conceptual, mechanism based synthesis was undertaken and a translational model generated. The four core sadvritta practices prescribed in Ashtanga Hrdaya were identified and mapped each one to an established psychological theory and its underlying neurobiological mechanisms to build a translational model. Routine integration of this model to daily practice and structured self evaluation were incorporated to support sustained practice.

Results: The model comprises four practices: Ardra santanata (compassion)- aligns with broaden and build theory, ventral vagal PNS activation and prefrontal dopaminergic pathway. It augments cognitive flexibility and lowers social anxiety Tyaga (relinquishing maladaptive tendencies) aligns with eudamonic well being and mesolimbic reward circuits underlying prosocial behaviour, satisfying the need for relatedness. Kaya-vak chetasam dama (regulation of body,mind and speech) aligns with self regulation theory. It maps to motor and inhibitory control, attentional deployment and social-response modulation, working memory and cognitive flexibility. Swartha-budhi-parartheshu (altruism) aligns with the meaning domain of Seligman's PERMA model, reducing systemic stress and enabling flourishing. These practices are embedded in daily routine, trained simultaneously across thought, speech and action and sustained self evaluation.
Conclusion: The proposed model generates testable hypotheses and measurable markers for clinical and public health research. It offers an ethically grounded, scalable approach to cognitive enhancement and sustainable well-being, bridging an Indian system of practices with contemporary neuroscience perspectives.

PP-71: Integrative rehabilitation following surgically managed cerebellar haemorrhage a case report of functional and gait recovery

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Aim: To describe functional and gait recovery following a 30-day integrative rehabilitation combining Ayurveda, yoga, and physiotherapy after surgically managed cerebellar haemorrhage.
Objectives: To assess changes in functional independence and muscle strength, document progression from wheelchair dependence to ambulation and evaluate post-rehabilitation gait.

Methods: A 45-year-old man with hypertensive cerebellar haemorrhage complicated by obstructive hydrocephalus underwent emergency decompressive craniectomy and duroplasty. Following neurosurgical stabilisation, he had residual hemiplegia, cerebellar dysfunction, severe imbalance and inability to ambulate independently. He underwent a 30-day multidisciplinary rehabilitation programme comprising physiotherapy, supervised Yoga and individualised Ayurvedic interventions including Sadhyovirechana, Agni Lepa, Utsadana, Dhanyamla Dhara, Yoga Basti, Shashtika Shali Pinda Sweda, Nasya, Pratisarana and Pizhichil. Functional outcomes were assessed using the Barthel Index, Medical Research Council (MRC) muscle-power grading, and gait assessment.

Results: At baseline, the patient had a Barthel Index of 10/100 and MRC muscle power of 3/5. Following 30 days of rehabilitation, the Barthel Index improved to 30/100 and muscle power to 4/5. At baseline, formal gait assessment using the Functional Ambulation Profile (FAP) was not feasible because the patient was wheelchair-bound and unable to walk due to severe imbalance. Following integrative rehabilitation, the patient became ambulatory and underwent objective gait assessment, achieving an FAP score of 62. This remained below the reported reference range of approximately 95–100 for individuals without gait disability, indicating persistent gait impairment despite functional improvement. No treatment-related adverse events were documented.

Conclusion: This case demonstrates clinically meaningful functional recovery with the emergence of independent gait assessment capability following a 30-day multidisciplinary integrative rehabilitation programme after surgically managed cerebellar haemorrhage. The findings support the feasibility of integrating

Ayurveda, Yoga and physiotherapy into post-surgical neurological rehabilitation. Controlled studies with standardised interventions and objective longitudinal gait assessment are warranted.

PP-72: Sattvavajaya Yoga and cognitive retraining a holistic metacognitive model for rehabilitation

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Aims/Objectives: This conceptual paper proposes a holistic rehabilitation model for Acquired Brain Injury (ABI) that synthesis established neuropsychological frameworks - Executive Function Self-regulation theory (EF-SR), Polyvagal Theory, Neurovisceral Integration Model - with Ayurveda and yoga Paradigms, specifically the Triguna model and Pranayama serving the objectives of Sattvavajaya Chikitsa. The aim is to create an integrated approach that addresses both cognitive deficits and underlying autonomic dysregulation.

Methods: The proposed intervention begins with "Understanding Brain Injury" sessions to build self-awareness and a safe therapeutic milieu, followed by long-term goal setting utilizing Goal Attainment Scaling (GAS). The core methodology integrates cognitive retraining with arousal regulation through a modified Goal Management Training (GMT) sequence: Task Start-STOP (At Error)-STATE-GOAL-SPLIT-DO-CHECK. The critical addition is the "STATE" component, functioning as an "Autonomic Gatekeeper". During a task (at error), if autonomic arousal is not regulated (lacking Sattvic balance), somatic regulation is immediately initiated using Ashtanga yoga-based Pranayama (to serve the objective of Sattvavajaya Chikitsa). Once autonomic balance is achieved, the patient proceeds to the cognitive strategy audit and task execution.

Results: Theoretically, this integrated approach utilizes the Triguna model to cultivate a "Sattva" state, which is associated with enhanced emotional regulation, thought control, and prefrontal executive functioning. By deploying Pranayama to correct the imbalances at Annamayakosha and Pranamayakosha, the model anticipates sustained somatic regulation of autonomic and respiratory responses. This autonomic stability serves as a foundational precursor, improving the efficacy of subsequent cognitive retraining tasks for attention, memory, and activities of daily living (ADL).

Conclusion: By bridging neuropsychological cognitive strategies with Ayurveda-yoga somatic regulation techniques, this proposed framework offers a comprehensive, neurovisceral informed model for ABI rehabilitation. It highlights the necessity of managing physiological arousal as a

prerequisite for effective cognitive and executive function recovery.

PP-73: Effect of brahmi ghrita on cognitive neurodegenerative and neurotrophic parameters in mild cognitive impairment a double-blind randomized placebo-controlled trial

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Aims/Objectives: To evaluate the effects of Ayurveda intervention in patients with Mild Cognitive Impairment (MCI) on clinical and biochemical outcomes.

Methods: This double-blind, randomized, placebo-controlled trial will include 60 participants allocated equally to two groups (n=30 each) using computer-generated random numbers, with allocation concealment ensured through sequentially numbered, opaque, sealed envelopes. Participants will be recruited through convenience sampling, with subjects and outcome assessors blinded to group allocation. Inclusion criteria: Adults aged ≥55 years, irrespective of gender, with single- or multiple-domain amnestic mild cognitive impairment, subjective or informant/clinician-reported cognitive decline, objective impairment in one or more cognitive domains relative to age and education, and preserved functional independence. Exclusion criteria: Major cognitive or neurodegenerative disorders, head injury, cerebrovascular accident, severe mental disorders, alcohol or substance abuse within the past two years, and uncontrolled diabetes, hypertension, dyslipidaemia, or thyroid disease.The intervention group will receive 15 mL of Brahmi Ghrita, procured from a GMP-certified pharmacy, twice daily after food with warm water for 12 weeks. The control group will receive plain ghee with inert excipients, formulated to match the colour, consistency, and taste of the intervention. The primary outcome will be NNBE, while secondary outcomes will include serum neurofilament light chain (NfL), brain-derived neurotrophic factor (BDNF), Neuropsychiatric Inventory Questionnaire (NPI-Q), and WHOQOL-BREF.

Results: All the data collected at baseline and after the treatment on outcome measures will be tabulated and analyzed using R software. The change in the parameters at various time points would be assessed using Repeated Measures Analysis of variance (RMANOVA) or Friedman's test. As there are multiple outcomes in the

proposed study, suitable post hoc corrections for multiple comparisons will be considered during analysis. .

Conclusion: The results of this study will generate evidence base for the efficacy of add on Brahmi ghrita on MCI and its probable mode of action.

PP-74: Ayurvedic management of udavarta presenting with adhmana and asamadhanakara malapravritti a case report

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Aim:-To evaluate the clinical outcome of an individualized Ayurvedic management approach in a patient presenting with features of Udavarta.
Objective:- To assess the changes in clinical symptoms of Udavarta, particularly Adhmana (abdominal distension), Asamadhanakara Malapravritti (unsatisfactory bowel evacuation),Udgar pravritti, Urah Daha (retrosternal burning), Shirahshula (headache), and Manyashula (neck pain), following the prescribed treatment. To assess changes in bowel habits using the Bristol Stool Form Scale (BSFS) and Constipation Assessment Scale (CAS) before and after treatment.

Methods: A 43-year-old male patient from Nagpur, Maharashtra, presented with abdominal distension (Adhmana) for six months and neck pain (Manyashula) for three months. Other complaints included unsatisfactory bowel evacuation (Asamadhanakara Malapravritti), retrosternal burning (Urah Daha), and headache (Shirahshula). The patient was assessed using the Bristol Stool Form Scale (BSFS) and the Constipation Assessment Scale (CAS). The treatment regimen consisted of daily administration of Eranda Taila for Virechana, along with prescribed Yoga practices, dietary modifications, and correction of daily routine (Dinacharya). Clinical symptoms and assessment scores were monitored to evaluate the response to treatment.

Results: Following Ayurvedic management with 5 mL Eranda Taila for Nitya Virechana, along with Yoga, dietary modifications, and correction of Dinacharya during Sharad Ritu, the patient reportedly experienced approximately 80% overall symptomatic relief. Changes in bowel habits were assessed using the Bristol Stool Form Scale (BSFS) and Constipation Assessment Scale (CAS).
Conclusion: Ayurvedic management comprising Eranda Taila Nitya Virechana, Yoga, dietary modifications, and correction of Dinacharya was associated with approximately 80% symptomatic relief in this patient with Udavarta. Further

systematic studies are required to establish the effectiveness and safety of this integrated approach.

Keyword:- Udavarta ,Constipation, Adhman,Dincharya ,

PP-75: In vitro analysis of telomere lengthening in senescence cell effect of Centella asiatica linn shortening in cancer cell effect of Andropraphis paniculata nees ethonolic extract on telomere disfunction in cancer cell

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Aims/Objectives: The aim of this study was to investigate the potential of Andrographis paniculata to inhibit telomerase activity and promote telomere shortening in cancer cells, while evaluating the potential of Centella asiatica to protect telomeres in ageing cells. The specific objectives were to identify the phytochemical constituents of both plants using GC–MS evaluate their antioxidant properties, assess the anti-inflammatory activity of Andrographis paniculata, and investigate the interaction of identified phytochemicals with telomerase reverse transcriptase (TERT) using molecular docking and invitro cell line study .

Methods: Fresh plant materials were collected and authenticated before extraction using the Soxhlet method with 70% ethanol. Phytochemical constituents were analysed using GC–MS. Antioxidant activity was evaluated using DPPH free-radical scavenging and superoxide radical-scavenging assays. The anti-inflammatory activity of Andrographis paniculata was assessed using the albumin denaturation assay. Molecular docking was performed to predict the binding affinity of identified phytochemicals towards TERT. In vitro cell-line studies were also considered to investigate anticancer potential. However, direct telomere-length measurements and telomerase activity assays are necessary to confirm the proposed effects.

Results: Centella asiatica demonstrated strong antioxidant activity, with a DPPH IC_{50} of 43.82 µg/mL, compared with 278.46 µg/mL for Andrographis paniculata. Andrographis paniculata exhibited anti-inflammatory activity, with an IC_{50} of 109.98 µg/mL. Both extracts showed concentration-dependent superoxide radical-scavenging activity. Molecular docking suggested that certain phytochemicals from Andrographis paniculata could interact favourably with TERT & in vitro cell line positive control (doxorubicin) reduced HeLa cell viability to 5.4%; II-G and HHH achieved 5.2% and 5.3%, respectively, at 100 µg/mL.

Conclusion: The findings suggest complementary

therapeutic potential for the two medicinal plants. Andrographis paniculata may warrant further investigation as a potential anticancer agent, while Centella asiatica may have applications in protecting cells against oxidative stress associated with ageing. Further cell-based experiments are required to establish their effects on telomere length, telomerase activity, cellular ageing, and cancer progression.

PP-76: Seasonal pitta-related symptoms and meteorological changes a cross-sectional observational study based on Ayurvedic concepts of chaya prakopa and prasara

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Background: Ayurveda explains seasonal variations in Dosha through the stages of Chaya, Prakopa and Prashama. Pitta Dosha is associated with characteristics such as Ushna (heat) and Drava (fluidity). Burning sensation and increased thirst may represent Pitta-related clinical features. Examining these symptoms alongside meteorological changes may provide an opportunity to explore classical Ayurvedic concepts in the context of contemporary environmental variability.

Aims: To observe seasonal Pitta-related symptoms among apparently healthy adults and explore their possible relationship with changes in environmental temperature and relative humidity.
Methods: Methods: A cross-sectional observational study was conducted among 20 apparently healthy adults. Burning sensation and increased thirst were considered as Pitta-related symptoms and observed in relation to seasonal and environmental conditions. Changes in ambient temperature and relative humidity were considered while interpreting the observed symptom patterns. Descriptive analysis was used to summarize the findings. The study aimed to explore the potential relationship between Ayurvedic symptom descriptions and environmental variability.

Results: Results: Season-related symptoms, particularly burning sensation and increased thirst, were observed in 12 of the 20 participants (60%). The observations suggested a possible relationship between the occurrence of these symptoms and rising environmental temperature and humidity. However, formal statistical correlation, effect estimates and statistical significance were not established. The findings are therefore preliminary and descriptive.

Conclusion: These preliminary observations suggest a possible association between Pitta-related symptoms and meteorological changes. Integrating Ayurvedic seasonal concepts with

environmental observations may provide a framework for further investigation of Ritucharya under changing climatic conditions. Larger studies involving standardized symptom assessment, objective meteorological measurements and repeated observations across different Ritus are necessary to evaluate seasonal Dosha dynamics and establish the strength and clinical relevance of these associations.

PP-77: Integrated Ayurvedic management of sthaulya obesity through diet Yoga dhauti and Yoga basti a case study

Ankita Agrawal, *PG Student (Ayurveda)*
Dr. Alka Mundkar, PG final year
Dr. Sumeeta Jain, Professor and HOD Swasthavritta and Yoga department
Government Ayurveda College,Nagpur

Aims/Objectives: To document the outcome of an integrated Ayurvedic intervention in a patient with Sthaulya. To evaluate the effect of an integrated approach comprising diet, yoga, Dhauti, and Yog Basti on body weight reduction in a patient with Sthaulya (obesity) over one month.

Methods: A 39-year-old female patient with obesity underwent an integrated intervention under the Department of Swasthavritta and Yoga for one month. The treatment comprised appropriate dietary modifications, yoga practices, Dhauti (a yogic cleansing practice classified under Shatkarma), and Yoga Basti Krama, administered alternately using Triphala Kwatha and Triphala Siddha Taila.

Results: The patient's initial body weight was 76 kg, which decreased to 73 kg after one month, demonstrating a total weight reduction of 3 kg .Patient experienced significant relief from all the symptoms, weight ,BMI, Anthropometric measurements in 30 days.

Conclusion: The present case demonstrated a reduction in body weight from 76 kg to 73 kg following one month of integrated management involving dietary modifications, yoga, Dhauti, and Yog Basti Krama. This outcome suggests the potential utility of a comprehensive approach incorporating Swasthavritta principles and yogic practices in the management of Sthaulya (obesity).

PP-78: Awareness and utilization of Ayurveda and Yoga for preventive healthcare among college students a community-based cross-sectional study

Suhas Yadav, *Intern*
Atreya Ayurvedic Medical College Hospital and Research Centre

Aims/Objectives: To assess awareness, attitudes, and utilization of Ayurveda and yoga for

preventive healthcare among college students and identify factors associated with their use.

Methods: A community-based cross-sectional study will be conducted among college students using a structured questionnaire. Data will be collected on demographic characteristics, awareness of Ayurveda and yoga, lifestyle practices, sources of healthcare information, and utilization of traditional preventive healthcare practices. Descriptive statistics will summarize responses, and appropriate statistical tests will assess associations between participant characteristics and utilization patterns. Ethical approval and informed consent will be obtained as applicable.

Results: Results will be reported after data collection, including the proportion of students aware of Ayurveda and yoga, their reported utilization, common preventive practices, and factors associated with utilization. No numerical findings are available at the proposal stage.

Conclusion: The study may help identify gaps in awareness and utilization of traditional preventive healthcare practices among college students. Its findings could inform evidence-based health education initiatives that integrate appropriate traditional practices with established public health recommendations.

PP-79: Development and expert evaluation of a therapist delivery manual for standardized Yoga therapy for patients with depression

Pilli Devi Vidya Sagar, *Research Scholar,*
Dr. Hemant Bhargav, Associate professor of Yoga
Dr. Shivarama Varambally, Professor of Psychiatry
Dr. Aditi Devi N, Senior Scientific Officer
NIMHANS

Aims/Objectives: To develop and qualitatively evaluate a therapist delivery manual for a validated yoga therapy module for patients with depression.
Methods: The manual was developed iteratively using the validated yoga module, traditional and contemporary literature, clinical experience, therapist observations, and patient feedback. Eight experts with relevant expertise in yoga therapy, mental health, and clinical practice qualitatively evaluated the manual. Their recommendations were reviewed and incorporated.

Results: The manual guides therapist preparation, session structure, practice delivery, communication, clinical adaptations, safety, and documentation. Experts considered the manual appropriate, suggesting mainly minor refinements in content, clarity, clinical guidance, and presentation. These recommendations were incorporated, completing the development phase.
Conclusion: The manual integrates evidence, clinical experience, patient perspectives, and

expert evaluation to support standardized yoga therapy delivery for patients with depression. Further, content validation by an independent expert group will precede manual finalization and a pilot randomized controlled trial, comparing manualized and non-manualized delivery.

PP-80: Integrating manasika prakrti perceived stress and yogic practices among young adults an Ayurvedic and modern psychological perspective

Kartik Karabannavar, *BAMS Student*
SBG Ayurvedic medical college and hospital

Aims/Objectives: To assess the association between Manasika Prakrti, perceived stress and yogic practices among young adults aged 18–35 years.

Methods: A cross-sectional observational study will be conducted among young adults aged 18–35 years, subject to necessary ethical approval. Participants will be recruited using an appropriate sampling method from the selected study setting. Manasika Prakrti will be assessed using a validated or suitably standardised assessment tool and perceived stress will be measured using a standardised psychological scale. Information regarding yoga practice - including type, frequency, duration, intensity and period of practice, will be collected through a structured questionnaire. Relevant sociodemographic and lifestyle factors, such as age, gender, educational status, sleep pattern and physical activity, may also be recorded as potential confounding variables. Data will be summarised using descriptive statistics and associations between Manasika Prakrti, perceived stress and yogic practices will be analysed using appropriate statistical methods. Where applicable, subgroup analysis may be performed according to regular and irregular yoga practice.

Results: Evidence suggests that Sattva is associated with lower perceived stress, whereas Rajas and Tamas are associated with higher perceived stress. Research also indicates that yoga may reduce perceived stress and improve psychological well-being, although evidence quality and outcomes vary across studies. Whether these relationships are observed in the present study remains to be established.

Conclusion: Integrating Ayurvedic mental constitution, modern psychological assessment and yogic practices may provide a holistic framework for understanding stress among young adults. Further research may clarify these relationships and inform integrative mental health approaches.

PP-81: Yoga as an adjunctive intervention for migraine a systematic review of clinical outcomes and potential neurophysiological mechanisms

Alexin Swarna, *Excel medical college for naturopathy and yoga*

Aims/Objectives: Migraine is a neurological disorder associated with recurrent headache attacks, sensory disturbances, and substantial impairment in quality of life. Yoga combines physical postures, breathing techniques, and relaxation practices and may serve as an adjunct to conventional migraine management.

To systematically review the effects of yoga-based interventions on migraine frequency, headache severity, migraine-related disability, and quality of life, while exploring reported neurophysiological outcomes.

Methods: A systematic literature search will be conducted in PubMed/MEDLINE, Scopus, Web of Science, Embase, and other relevant databases, subject to availability. Studies involving individuals with migraine who received yoga-based interventions will be assessed against predefined eligibility criteria. Primary outcomes will include monthly migraine days or headache frequency. Secondary outcomes will include headache severity, disability, quality of life, medication use, and neurophysiological measures where available. Study selection and reporting will follow PRISMA 2020 guidance.

Results: The results will be determined after study selection and data extraction. The synthesis will report the number and characteristics of included studies, effects on migraine-related clinical outcomes, reported neurophysiological findings, and the methodological quality and consistency of the evidence. Yoga, when used as an adjunct to standard migraine treatment, is expected to reduce migraine frequency, headache severity, and migraine-related disability while improving quality of life compared with standard treatment alone. These benefits may be associated with improved stress regulation and autonomic nervous system function.

Conclusion: This review will clarify the current evidence regarding yoga as an adjunctive intervention for migraine and identify gaps in clinical and neuroscience research. The findings may inform future studies investigating the clinical effects and potential mechanisms of yoga in migraine management.

PP-82: Yoga for cognitive enhancement in patients with remitted unipolar depression: a randomised controlled trial

Dr. Daiveek P.G.
Department of Integrative Medicine, NIMHANS

Background: Cognitive difficulties may persist

after remission from unipolar depression and are not adequately addressed by standard treatment. This pilot randomized controlled trial examined whether adjunctive yoga improves cognition in remitted depression. Methods: Participants with remitted unipolar depression (Hamilton Depression Rating Scale score 0.05). Descriptive trajectories favored yoga for processing speed, working memory, and set-shifting, but estimated effects were small. Conclusions: In this underpowered pilot trial, adjunctive yoga was feasible to study and showed preliminary descriptive patterns of cognitive improvement, without statistically significant between-group differences in the assessed domains. Findings are inconclusive and should not be interpreted as evidence of efficacy. Larger, adequately powered trials with refined cognitive measurement models are needed to test whether yoga produces clinically meaningful cognitive benefits for people with remitted unipolar depression and assess longer-term clinical relevance.

PP-83: Cognitive and structural brain correlates of long-term Vedic oral expertise: a cross-sectional study

Bharath Holla 1*, *Ahalya Sharma 2, Shreeraksha Sreenivasan 1, Bhumika Parab 1, Hemant Bhargav 1, Prafull Trivedi 2, Shantala Hegde 3, Nishitha Jasti 1, Umesh Chikkanna 1, Venkataram Shivakumar 1, Kishore Kumar Ramakrishna 1, Ganesan Venkatasubramanian 4, Shivarama Varambally 4*

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4 Department of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, India

Background: The Vedic oral tradition requires practitioners to memorize and precisely reproduce thousands of metrically constrained syllables over many years of training. Whether such intensive verbal expertise is associated with broad cognitive differences or selective specialization remains unclear.

Objective: To characterize the cognitive and structural brain correlates of long-term Vedic oral training by comparing traditionally trained Vedic scholars (VS) with chanting-naïve controls.

Methods: We compared 75 VS with 75 controls matched for age, sex, and education. A cognitive battery assessed verbal span, verbal learning, set-shifting, cognitive flexibility, visuospatial span,

processing speed, and stop-signal inhibition. A subsample of 50 participants (25 per group) underwent structural MRI. Cortical, subcortical, and cerebellar measures were analysed using normative modelling, and hippocampal volume and fine-grained morphometry were examined along the long axis.

Results: VS showed better backward verbal span (adjusted SMD=0.54, 95%CI 0.22–0.86), verbal learning (SMD=0.48, 0.16–0.80), set-shifting accuracy, and rule-based cognitive flexibility (SMDs up to 0.56), while other domains did not differ. VS had greater cortical thickness in left middle frontal and lateral superior temporal regions, with no corrected differences in surface area, subcortical, or cerebellar measures. Overall hippocampal volume did not differ, but VS showed relatively greater anterior versus posterior left hippocampal volume (group×long-axis interaction: β=0.42, p=0.006), with greater thickness localized to left anterior CA1. Among VS, this anterior-posterior pattern correlated with backward digit span (ρ=0.45, p=0.024).

Conclusions: Long-term Vedic oral expertise is associated with selective differences in verbal working memory, learning, and cognitive flexibility, together with regional cortical and spatially specific hippocampal organization, rather than generalized cognitive or structural enhancement.

Conflicts of Interest: The authors declare no potential conflicts of interest.

PP-84: Mother-baby Yoga for maternal sensitivity and bonding in postpartum women with severe mental illness: RCT

Dr Nandini M K,
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Background: Postpartum severe mental illness (SMI) can adversely affect maternal sensitivity and mother–infant bonding. Dyadic interventions integrating yoga and infant massage may support maternal –infant interaction, but their effects on objectively assessed materna l sensitivity in women with SMI remain insufficiently studied. Aim: To evaluate the effect of mother –baby yoga augmented with Ayurvedic infant massage on maternal sensitivity and bonding among postpartum women with SMI. Methods: This single-blind, two-arm randomised controlled trial will recruit 60 postpartum women with SMI and their infants from the Mother –Baby Psychiatry Unit at the National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru. Participants will be randomly allocated in a 1:1 ratio to either a two -week supervised mother – baby yoga intervention augmented with Ayurvedic infant massage administered by the mother, alongside standard treatment, or an attention - matched control intervention comprising supervised walking, pram walking or play, a nd oil

application administered by someone other than the mother, alongside standard treatment. The primary outcome is maternal sensitivity, assessed using NICHD-inspired qualitative ratings of mother –infant interaction. Secondary outcomes include mother–infant inter-brain synchrony assessed through electroencephalography (EEG) hyperscanning, infant facial emotion recognition, clinical global impressions, sleep disturbance, postpartum bonding, and yoga performance. Assessments will be conducted at baseline and after two weeks. We will analyse data using linear mixed-effects models. Expected outcomes: The study is expected to provide evidence on the effectiveness and feasibility of a culturally relevant dyadic intervention to improve maternal sensitivity, bonding, and mother–infant interaction among postpartum women with SMI.

PP-85: Differential neuromodulatory effects of uninostril breathing: a protocol for TMS study.

Dr Shravanthi,

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Background: Major depressive disorder (MDD) is associated with alterations in cortical inhibition and neurotransmitter systems, including gamma-aminobutyric acid (GABA). Yoga and pranayama may influence neurophysiological activity and emotional regulation. However, the immediate neuromodulatory effects of unilateral nostril breathing in patients with MDD remain insufficiently explored.

Aims: To investigate neuomodulatory effects of UNB by assessing cortical TMS parameters in patients with Depression. Methods: This three-arm, randomized controlled experimental study will recruit 60 patients aged 18–60 years diagnosed with MDD from the Departments of Psychiatry and Integrative Medicine at NIMHANS, Bengaluru. Participants will be randomized into Unilateral right nostril breathing,, unilateral left nostril breathing, or breath awareness groups, with 20 participants in each group. Baseline depression severity will be assessed using the Hamilton Depression Rating Scale (HAM-D). Transcranial magnetic stimulation (TMS) will be performed before and after the 10-minute intervention to assess cortical silent period (CSP), short-interval intracortical inhibition (SICI), long-interval intracortical inhibition (LICI), and intracortical facilitation (ICF). The Positive and Negative Affect Schedule (PANAS) will assess immediate changes in affect. Data will be analysed using linear mixed-model analysis. Results: The ethical clearance for the study has been obtained from the NIMHANS ethics committee and the CTRI for the same has been approved. Recruitment for the study is underway. Conclusion: The findings may improve understanding of the acute neuromodulatory effects of unilateral nostril breathing and its potential role as an adjunctive yoga-based intervention for MDD.

PP-86: Phytochemical profiling of Nardostachys jatamansi and its mechanistic role in the gut- brain axis, epigenetics, neuroplasticity and neuroinflammation in major depressive disorder: a randomized controlled trial protocol

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Background: Major depressive disorder (MDD) involves complex interactions among neurotransmission, inflammation, neuroplasticity, and the gut-brain axis. Nardostachys jatamansi (Jatamansi), an Ayurvedic medicinal plant, exhibits potential antidepressant, neuroprotective, and anti-inflammatory properties. However, its clinical mechanisms, particularly in gut-brain interactions, epigenetic regulation, and cortical excitability, remain uNexplored. Scientific profiling of its bioactive constituents is also essential for promoting its sustainable use and conservation.

Objective: The study was designed to characterize Himalayan N. jatamansi phytochemically and investigate the mechanistic effects of stand-alone Jatamansi in mild-to-moderate MDD, focusing on gut-brain axis, epigenetic, inflammatory, neurotrophic and neurophysiological pathways.

Methods: A two-arm randomized controlled trial with assessor blinded outcome assessment was designed at NIMHANS, Bengaluru. Drug-naïve or drug-free 65 adults aged 18–50 years meeting Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria for MDD were randomly allocated to Jatamansi or escitalopram for 8 weeks. Jatamansi wasadministered at 3 g thrice daily after food. Primary outcomes included plasma short-chain fatty acids (SCFAs), miR-16, miR-135a and miR-1202, and transcranial magnetic stimulation (TMS)-derived cortical excitability measures. Secondary outcomes included inflammatory markers, plasma brain-derived neurotrophic factor (BDNF), Hamilton Depression Rating Scale (HDRS), Montgomery-Åsberg Depression Rating Scale (MADRS), Vishada Rating Scale, High-performance liquid chromatography (HPLC) and liquid chromatography-mass spectrometry (LC-MS) willbe used for phytochemical and plasma bioactive characterization.

Conclusion: This protocol will establish a multidimensional translational framework linking Jatamansi phytochemicals and circulating bioactive molecules with gut-brain, epigenetic,

inflammatory, neurotrophic, neurophysiological and clinical pathways. This mechanistic evidence framework could, facilitate identification and standardization of therapeutically relevant biomolecules, and support future therapeutic development and conservation- oriented research if natural availability becomes increasingly restricted.

PP-87: Virechana karma in schizophrenia: preliminary evidence of changes in gastric myoelectrical activity, autonomic balance, and clinical symptoms

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Background: Schizophrenia is associated with alterations in autonomic regulation and the gut-brain axis. Vagal tone and gut microbiota may provide mechanistic links between gastrointestinal and neuropsychiatric processes. Virechana Karma, an Ayurvedic therapeutic procedure, may influence these systems, but its effects in schizophrenia require systematic evaluation. Aims: To evaluate the effect of add-on Virechana Karma on vagal tone and gut microbiota in individuals with schizophrenia, and to examine associated biochemical, gastrointestinal and clinical changes.

Methods: This clinical observational study comprises a baseline case-control comparison and a longitudinal pre–post assessment. A total of 110 participants (55 schizophrenia and 55 healthy controls) will be included for baseline comparison, with 34 schizophrenia participants planned for the longitudinal component. Participants will receive Deepana-Pachana, Snehapana and Virechana over 13–25 days. Vagal tone will be assessed using heart rate variability and electrogastrography, while gut microbiota will be evaluated using 16S rRNA sequencing. Liver function tests, lipid profile, serum electrolytes, BPRS, CGI, SANS, SAPS, GSRS, WHOQOL-BREF, MoCA and Perceived Stress Scale will be assessed longitudinally as secondary outcome measures.

Results: The protocol specifies assessments before Deepana-Pachana, before Virechana and after

Virechana. Planned analyses will determine changes in autonomic measures, gastrointestinal electrical activity, gut microbiota, biochemical parameters and clinical outcomes, and examine associations between mechanistic and clinical changes.

Conclusion: The study is expected to generate preliminary evidence on the neurobiological and systemic effects of Virechana Karma in schizophrenia and may clarify potential gut-brain and autonomic mechanisms relevant to integrative mental healthcare.

PP-88: Add-on effect of integrative Yoga and Ayurveda treatment in the management of cognitive dysfunction in schizophrenia – an assessor blind randomized controlled trial.

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Background Cognitive impairment affects 75 to 85% of people with schizophrenia, responds poorly to antipsychotic treatment, and contributes significantly to long-term disability. Evidence from various studies implicate inflammation in schizophrenia, while metabolic syndrome and its individual components have shown association with cognitive impairment. In addition, there exists a bidirectional relationship between metabolic dysregulation and inflammation that contributes to cognitive dysfunction. Methods It is an assessor blind randomized controlled study, to systematically evaluate the efficacy of add-on IYA (Kalyanaka Ghrita and schizophrenia yoga module) on cognitive symptoms using, BACS (Brief Assessment of Cognition in schizophrenia) & SOCRATIS (Social Cognition Rating Tools in Indian Setting) in schizophrenia after 3 months of intervention, in 60 subjects. Secondary objective of this study focuses on changes in Clinical (SANS & SAPS), Immune (T-regulatory cell population (HLA-DR+ And CD4+)), Metabolic parameters (NHHR and TyG), Vata imbalance (VaRS), and Social functioning (GSDS). Discussion Kalyanaka Ghrita comprising of 28 herbal constituents has a potential to improve cognition, antioxidant status, while reducing neuroinflammation and conferring neuroprotection. The ghee base is rich in bioactive fatty acids, including short-chain fatty acids, conjugated linoleic acids, omega-3 and omega-6 fatty acids, etc., that might contribute to antioxidant, anti- inflammatory properties, supporting brain health and metabolic regulation. Further, Yoga has shown benefits in improving cognition, metabolic syndrome, with potential anti- inflammatory effects making it a promising complementary intervention.

Conclusion Adjunct IYA will improve cognitive functioning in schizophrenia through modulation of inflammatory and metabolic pathways, leading to psychosocial improvement.

PP-89: Hasta mudras and autonomic regulation: traditional perspectives, contemporary evidence and future research directions

Aswathy Rajesh, *NIMHANS*

Background: Hasta mudras, symbolic hand gestures described in yogic texts, are widely taught yet rarely examined scientifically. Classical sources link them to the regulation of prana and its subtypes; apana, for instance, is associated with digestion and elimination. Whether such gestures can influence autonomic function remains an open question. Aims: To explore traditional and contemporary views of hasta mudras, appraise the evidence for their autonomic and neurophysiological effects, and outline priorities for future research. Methods: Narrative review drawing on classical yogic literature and contemporary work on mudras, embodied cognition, interoception, meditation, and autonomic regulation. Results: The hand's rich sensorimotor representation and embodied cognition frameworks offer a plausible route by which gesture might shape autonomic activity. Wider yoga and meditation research reports changes in heart rate variability and stress-related measures, yet studies isolating mudras are scarce. Singh et al. (2023) reported headache relief with Mahasirsa mudra among healthcare professionals, hinting at symptom-level benefit possibly involving pain-modulatory or autonomic pathways. Sudhir and Praveen (2026) discuss mudras within the pranamaya kosha framework, but this is textual analysis, not experimental evidence. Apana mudra has not been empirically shown to affect visceral or autonomic function; however, interoceptive and brain-gut mechanisms make this plausible and worth testing. Most studies lack adequate controls, and the gesture's contribution beyond breathing, meditation, and posture is unclear.

Conclusion: Hasta mudras are a promising yet under-investigated bridge between yogic tradition and autonomic neuroscience. Controlled studies using heart rate variability, EEG, validated gastrointestinal and psychological measures (e.g., IBS-QOL), and sham- gesture comparators are needed to establish independent effects. Keywords: Hasta Mudra, Apana Mudra, Autonomic Regulation, Yoga, Embodied Cognition

PP:90 Integrative Yoga and Naturopathy-Based Rehabilitation in Alcoholic Fatty Liver Disease: A Case Report

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Yoga), Assistant Professor - SSYNM, Division of Life Sciences, S - VYASA University, Bengaluru

Background: Alcoholic Fatty Liver Disease (AFLD) involves both hepatic dysfunction and psychological dependence. Integrative yoga and naturopathy offer a dual approach targeting hepatic recovery and alcohol de-addiction through holistic detoxification and behavioral regulation.

Case Presentation: A 38-year-old male with a 10-year history of AFLD presented with severe alcohol cravings and biochemical hepatic injury. He underwent a 10-day inpatient yoga and naturopathy rehabilitation program focused on liver recovery and de-addiction.

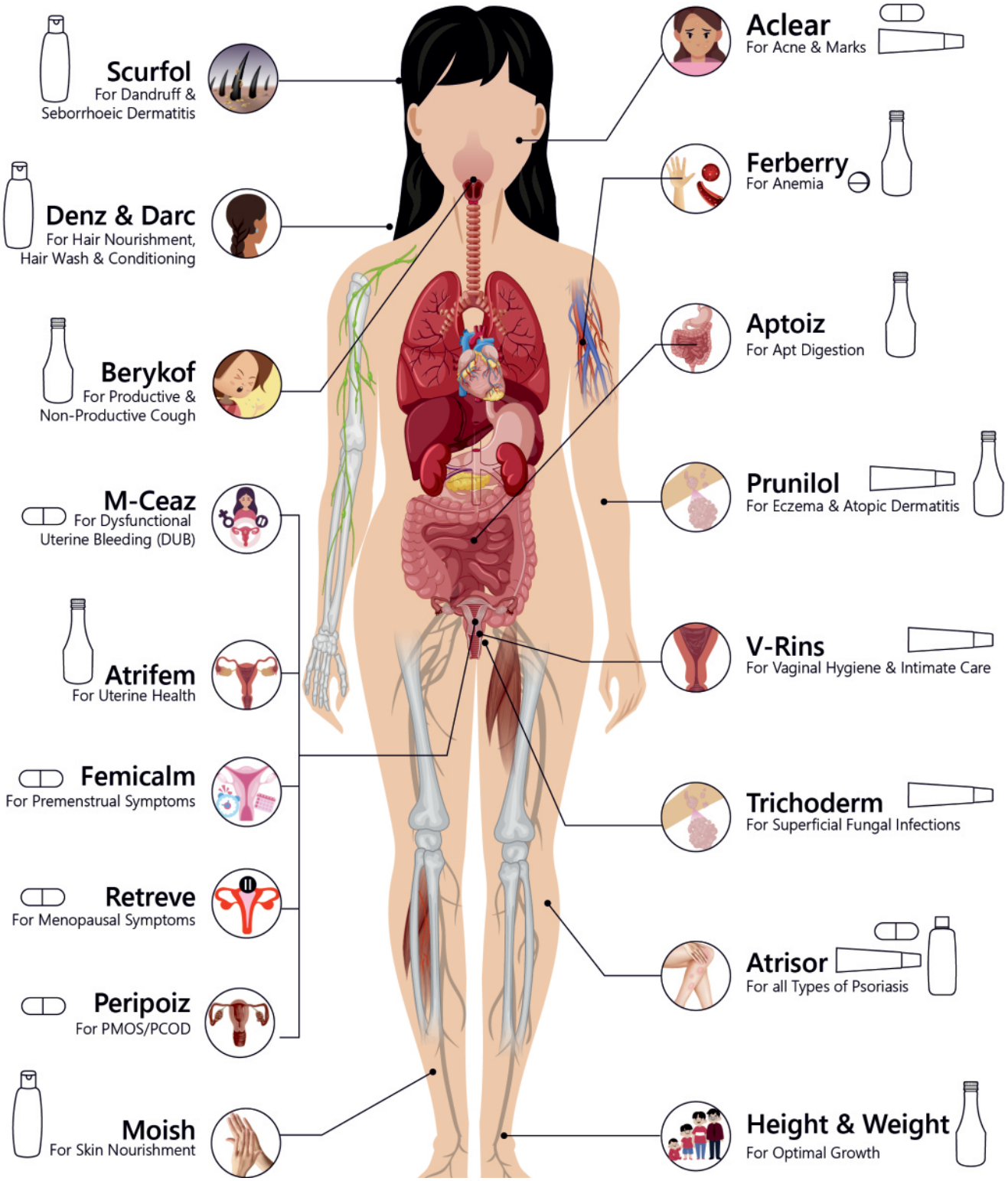
Intervention: The regimen integrated anti-craving yoga (asanas, pranayama, relaxation, meditation), naturopathic treatments (hydrotherapy, mud therapy, herbal packs), an antioxidant-rich plant-based diet, and structured de-addiction counselling emphasizing craving management and stress reduction.

Results: Post-intervention, marked biochemical and behavioral improvements were recorded: Total Bilirubin decreased from 2.7 to 1.2 mg/dL (Direct: 1.0 to 0.3; Indirect: 1.7 to 0.9 mg/dL), SGOT from 112 to 42 U/L, SGPT from 98 to 38 U/L, and GGT from 210 to 78 U/L. Alcohol craving, assessed using the Penn Alcohol Craving Scale (PACS), significantly dropped from 24/30 (severe) to 6/30 (minimal). The patient reported resolved withdrawal symptoms, improved appetite, better energy, and restored sleep quality.

Conclusion: Integrative yoga and naturopathy effectively enhanced hepatic function while facilitating alcohol de-addiction and craving reduction in AFLD. This multimodal framework offers a promising non-pharmacological adjunct to standard addiction and hepatology care, warranting further investigation through controlled trials.

Keywords: Alcoholic fatty liver disease, Alcohol de-addiction, Yoga therapy, Naturopathy, Penn alcohol craving scale, Liver enzymes

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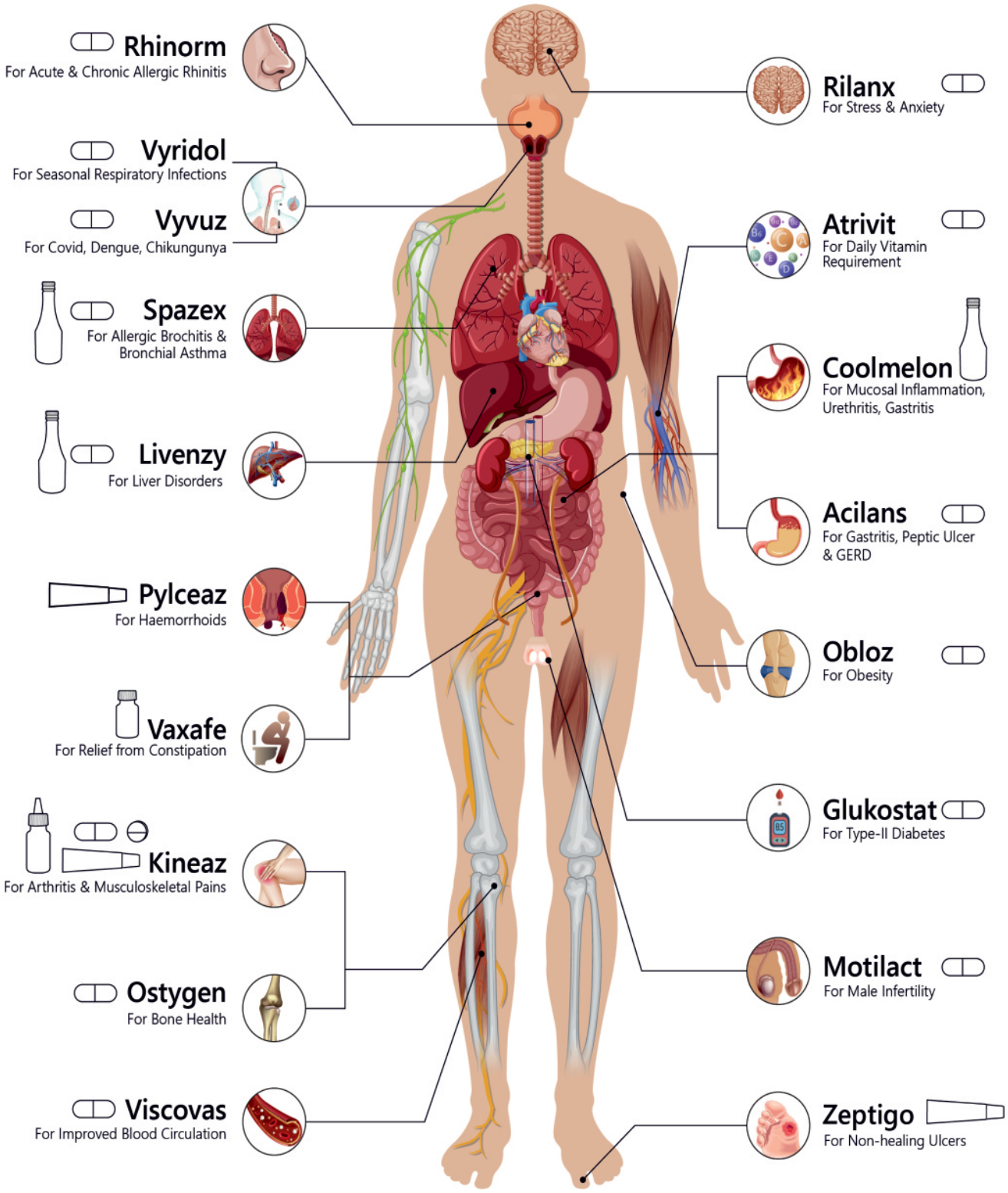
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