

Scope Of Research In Kriya Shareer

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Abstract

Kriya Sharir is the physiological backbone of Ayurveda which offers deep insights about functioning of the human body through foundational concepts of ayurveda like Dosha, Dhatu, Mala, Agni, Srotas, Sara, Oja, Bala etc. While these principles have directed Ayurvedic practice form ages, but now its high time to showcase evidence-based parameters, which depends on effective studies, interpretation and validation. through scientific methods. This article explores the wide-ranging scope of research within Kriya Sharir starting from literary interpretations of samhita's to development of standardized assessment tools and integration with modern diagnostic tools. By correlating the ancient physiological parameters with current biomedical parameters, like immune markers, metabolic indicators, and cardiopulmonary tests etc. The paper highlights the scope of Ayurveda to contribute to society.

Keywords: Ayurveda, research, Kriya sharir

Introduction:

Ayurveda is the ancient science of life. The word 'Ayurveda' is derived from the word 'Ayus' (life) and 'Veda' (knowledge). In spite of being one of the oldest sciences of medicine, it is still relevant to the modern era. Ayurveda revolves around the concept of the tridosha namely vata, pitta, and kapha, which represent physiologic principles governing all anatomical and physiological elements of the body. When these doshas are in a state of equilibrium, it is called health. Any imbalance between them is disease. Along with doshas, dhatus and malas also play a crucial role in maintaining the health of an individual. This shows importance of normal physiology of body, which we study under the subject Kriya sharir. Kriya Sharir is one of the most fundamental branches of Ayurveda which deals with the physiology that is normal functioning of the human body.

The Department of Education defines research as follows: Research is defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings. This could include synthesis and analysis of previous research to the extent that it leads to new and creative outcomes.¹

Conducting research in Kriya Sharir is about understanding the concepts behind our normal body functions and applying it in today's world. Concepts like Tridosha, satpadhatu, Agni, Prakriti etc give us meaningful insight about human body but without proper research and their validation with modern parameters, it remain as philosophical ideas. To make basic concepts of sharir kriya more practical, we need to validate with parameters which are

acceptable to society. This will be helpful for proper diagnosis and treatment.

Aims and objectives

1. To provide physiological insights about dosha, dhatu, mala, sarata, agni etc
2. To analyse the past researches in sharir kriya
3. To explore new research ideas in field of sharir kriya

Discussion

In present areas which have greater scope to do research in kriya shareer will be discussed along with few selected researches which as been already.

Literary Research in Kriya Sharir

Literary research refers to the proper systematic study and interpretation of Samhitas and their commentaries, which hold immense physiological knowledge that has not yet been completely explored. Such research helps decode classical verses and clarify conceptual ambiguities which form base for evidence practice. According to Charaka Samhita, systematic study of the body is essential for understanding both health and disease.² Shareer kriya related content is scattered across all sections which increases need of literary research. This can clear ambiguous terms, Improved teaching content, helps in development of new research tools and frameworks. Few of the researches has already been done in field of ayurveda like curating and interpreting the literature related to kriya sharir- a critical review by Dr. Mahendra Ashok Patil and Dr. Ankush Dattatraya Khedkar, they have systematically examined classical Ayurvedic texts and their commentaries to consolidate scattered physiological knowledge related to Kriya Sharir. It focuses on essential concepts such as *Dosha, Dhatu, Mala, Agni, Oja*, and *Srotas*, and highlights their significance in understanding human physiology. The authors decode classical terms like *Tushti, Preenana* and *Pushti*—linking them to modern physiological equivalents like psychological satisfaction, cellular nutrition, and tissue growth. The paper advocates for literary research as a foundation for Ayurvedic education and future experimental validation.³ Such comparative and contextual interpretations give new dimensions to teaching and research in Ayurveda.

Assessment Tools for Prakriti, Agni, Dhatusarata, and Bala

Ayurveda offers personalized approach to any individual. The parameters like Prakriti (constitution), Agni (digestive/metabolic capacity), Dhatusarata (tissue excellence), and Bala (strength/immunity) can be used in research by creating standardized, validated assessment tools.

Charaka Samhita describes Prakriti as Sharira-Svabhava determined at birth based on dominance of Vata, Pitta, or Kapha doshas.⁴ Multiple scales have been developed and validated like CCRAS Prakriti Assessment Tool which contain structured questionnaire integrating 3 dosha-based features.⁵ Chakrapani and Dalhana classify Agnibala into Tikshna, Manda, Sama, and Vishama Agni depending on digestion quality, appetite, and symptoms. Agni types vary by age, season, time of day.⁶ Status of agni can be validated by endocrinal and enzymatic assays.⁷ Ashtanga Hridaya describes characteristics of different dhatusarata like lustrous skin (Tvak), strong teeth (Asthi), or bright eyes (Rakta) etc. These are indicators of strength, immunity. To assess dhatusarata specific standardized and validated protocol were developed and successfully tested over patient.⁸ Charaka defines Bala as resistance to disease and ability to withstand hardships.⁹ An observational study to analyse the association between Deha Prakriti and Bala W. S. R. to Harvard step test has been done successfully.¹⁰ The

development ayurveda-compatible tools facilitates clinical decision-making, helps to integrate with modern health records. There is scope with Integration into digital health platforms, Use of AI and data analytics for Prakriti prediction and Agni monitoring.

Nadi Pariksha Using Modern Techniques

Nadi Pariksha is an ancient diagnostic method described in Ayurveda, which is performed to assess status of Doshas, swasthya and disease. Despite its diagnostic potential, it is highly difficult to perform nadi parikshana authentically, hence this needs scientific validation and needs to be converted into measurable parameters. The already prepared device for digital nadi pariksha is Nadi Tarangini which is developed in India. This device uses sensors to monitor waveform data to Dosha types. After analysing the status of dosha, dhatu and mala it will give detailed report in future studies characteristics of nadi can be correlated with ECG, EMG, and echocardiography, which can give us specific organ related pathology. AI can play crucial role in developing the tools

Dosha Variation with Age

Concept of Tridosha (vata, Pitta, and Kapha) are not stable they have capacity to produce disease. Understanding their variations will play crucial role in predicting disease susceptibility. The predominant dosha's as per age of individual are Kapha in Childhood, Pitta in Middle age, Vata in old age.¹¹ When we compare this with age-based physiology, Kapha stage is assessed with growth hormone, insulin, fat storage, Pitta stage is with metabolism, liver function, enzyme activity, Vata stage with bone mass, neuromuscular control etc. A study by Rotti et al. (2014) confirmed Prakriti-based differences in immune responses and metabolic profiles.¹² The study on dosha needs validation by considering these parameters.

Agni and Its Relation with Digestion and Metabolism

Agni is responsible for digestion, metabolism, transformation, and overall health. It govern the entire range of biochemical transformations. Any derangement in agni is considered the root cause of most diseases (Rogāḥ sarve api mandāgnau).¹³ Hence it is vital part of sharir kriya research in connection with modern digestive physiology and metabolism. Among 3 types of agni's, Jatharagni can be correlated with Digestive Enzymes and GI Hormones: HCl, pepsin, pancreatic enzymes etc. Dhatvagni that is agni present in various dhatus's can be correlated with Tissue-specific enzymes like Raktagni (enzymes in liver and spleen which regulates hemoglobin synthesis). As discussed by Anu Saini (2022), modern research can assess Agni using: Basal Metabolic Rate (BMR), Endocrine and Enzymatic markers (TSH, amylase, cortisol, ghrelin), Postprandial glucose/lipid tolerance tests, Thermogenesis studies (especially in Tikshnagni or Mandagni).¹⁴ The concept of Agni integrates gastrointestinal, metabolic, hormonal, and neurological functions. Integrating concept of Agni with enzyme assays, metabolic profiling etc offers wide scope for research in kriya sharir

Srotas and Their Relation with Modern Physiology

Srotas are fundamental anatomical and physiological pathways responsible for transportation, transformation, and communication within the body. Dushti of any Srotas leads to Srotodushti, hence the disease. These srotas functioning can be assessed with specific tests like Pranavaha Srotas with Spirometry, blood oxygen levels, chest X-ray, Udakavaha Srotas with Serum electrolytes, hydration status, edema markers, Mamsavaha srotas with Myography, serum protein levels, Svedavaha srotas with Thermography, skin conductance, spectrophotometry, raktavaha with CBC, ESR, hemoglobin levels, Medovaha with Lipid

profile etc.¹⁵ Modern science supports the idea that various channels in the body regulate homeostasis: Lymphatic and interstitial fluid dynamics resemble Udakavaha Srotas.¹⁶ In future studies, srotas can be assessed using imaging techniques.

Oja and Its Role in Immunity

Oja is the essence of all Dhatus and the final product of digestion and tissue transformation. It is compared with immunity that is Vyadhi Kshamatva, physical strength, mental stability, and Bala. Oja cannot be directly measured but the status of oja can be assessed by immune markers like Total WBC count, CD4/CD8 ratio, Immunoglobulin, Fatigue scales, sleep quality indices, metabolic rate, MMSE, anxiety/depression scales etc. Research that bridges Oja with biomarkers of immunity and stress physiology will be the great contribution of sharir kriya to society.

Modern Technologies in Kriya Sharir

The integration of modern diagnostic tools with kriya Sharir helps to assess concept of sharir kriya through measurable physiological parameters. Tools like Electrocardiography (ECG), Electroencephalography (EEG), Spirometry, Blood indices, and Hormonal assays has to be validated with scientific research.

Conclusion

Kriya Sharir presents a wide area for research that can bridge the wisdom of Ayurveda with the tools of modern science. To ensure the find relevance classical ideas like Dosha, Agni, and Oja etc in todays era, they must be validated by research, by certain tools and scientific interpretation. Efforts to correlate these concepts with physiological, biochemical, and psychological parameters provides huge support for research in sharir kriya. Incorporating technologies like ECG, spirometry, biochemical assays etc helps us to assess Ayurvedic parameters in objective ways.

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