



"A CRITICAL REVIEW ON SWA ANJALI PRAMANA AS A DETERMINANT OF ANTHROPOMETRIC RANGE IN HEALTHY POPULATION"

Ayurveda

Dr. Meghana V. Nikam

PG Scholar, Department Of Rachana Sharir, College Of Ayurved, Bharati Vidyapeeth Deemed To Be University, Pune, Maharashtra, India

Dr. Suvarna P. Shelar

Associate Professor, Department Of Rachana Sharir, College Of Ayurved, Bharati Vidyapeeth Deemed To Be University, Pune, Maharashtra, India.

Dr. Bharat M. Rokade

Associate Professor, Department Of Shalya Tantra, College Of Ayurved, Bharati Vidyapeeth Deemed To Be University, Pune, Maharashtra, India

ABSTRACT

Swa Anjali Pramana, an ancient Ayurvedic anthropometric method, involves using one's cupped hands to estimate body fluid volumes, primarily water (Udaka). This individualized measurement aligns with Ayurvedic principles of personalized assessment, reflecting variations in constitution (Prakriti) and structural proportionality. By evaluating fluid balance and body proportionality, Swa Anjali Pramana offers critical insights into health, functional capacity, and metabolic equilibrium. This review explores the theoretical foundations of Swa Anjali Pramana, its physiological significance, integration with modern anthropometry, and clinical and preventive applications. Highlighting its relevance as a simple, non-invasive, and constitution-sensitive assessment tool, the review emphasizes the alignment of classical wisdom with contemporary personalized health approaches.

KEYWORDS

Pramana Sharir, Swa Anjali, Anthropometry, Anguli Pramana, Anjali Pramana.

INTRODUCTION

Ayurveda, the traditional system of Indian medicine, provides a comprehensive framework for understanding the human body, health, and disease. Central to this framework is the concept of individualized assessment, recognizing that each person possesses a unique constitution, physiological balance, and susceptibility to illness. Among the many tools of clinical assessment described in Ayurveda, Pramana Pariksha—the evaluation of the body through measurement—holds a prominent position as it offers insights into both the structural and functional status of an individual¹.

One of the unique contributions of Ayurveda to the field of anthropometry is the concept of Anjali Pramana. Anjali refers to the volume that can be held in the hands when they are joined together to form a natural cavity. When this measure is applied for self-assessment, it is termed Swa Anjali Pramana. This method allows for a highly individualized evaluation, as the unit of measurement is derived from the person's own body. Unlike standardized measures, which may not accurately reflect inter-individual differences, Swa Anjali offers a flexible, person-centred approach to health assessment².

In modern health sciences, anthropometry is employed extensively to quantify human body dimensions for purposes ranging from growth assessment and nutritional evaluation to clinical risk prediction and ergonomics. Standard measures include height, weight, body mass index (BMI), waist-hip ratio (WHR), mid-upper arm circumference (MUAC), skinfold thickness, and body surface area (BSA)³. While these measures are precise and widely used, they rely on fixed standards and may not always accommodate individual variations due to genetics, lifestyle, or environmental factors.

Swa Anjali Pramana, on the other hand, inherently accounts for individual variability. By aligning the measurement of tissues, food portions, and therapeutic doses with the size and capacity of the person, it reflects a personalized approach centuries ahead of contemporary methods. This literature review aims to consolidate existing knowledge on Swa Anjali Pramana, examine its applications in Ayurveda, and explore its relevance in relation to modern anthropometric techniques.

Methodology

Pramana, meaning measurement, is integral to Ayurveda's approach to health assessment. In Charaka's description of Dashavidha Pariksha—the tenfold examination of a patient—Pramana is highlighted as an essential tool to determine the body's proportion, strength, and resilience. Pramana assessment includes measurement of the overall body (Deha Pramana), specific body parts (Anga Pramana), and volumetric assessment of bodily constituents (Anjali Pramana).

Classical texts emphasize that balanced body proportions indicate health, whereas disproportion may signal vulnerability to disease. Sushruta notes that individuals with balanced physical proportions possess strength, longevity, and immunity⁴. Vagbhata further reinforces that appropriate structural proportions are indicative of vitality and functional harmony⁵. These concepts align with modern understanding that proportionality of body components is associated with physiological efficiency and lower disease risk.

Pramana Pariksha in Ayurveda is therefore not merely a quantitative assessment; it is a holistic evaluation that considers physical structure, functional capacity, and overall health status. Anjali represents a volumetric unit obtained by cupping both hands together. When applied to self-assessment, it becomes Swa Anjali, serving as a personalized measure of the body's capacity. Ayurveda employs this unit to quantify body tissues (dhatus), prescribe dietary volumes, and determine therapeutic dosages. The use of Swa Anjali underscores the principle that measurement should reflect the individual rather than adhere to universal standards.

This concept demonstrates remarkable foresight in personalized health assessment. For instance, dietary recommendations based on Swa Anjali ensure that food intake matches digestive capacity, preventing both undernutrition and overnutrition. Therapeutic interventions similarly benefit from individualized dosing, enhancing safety and efficacy.

Classical Ayurvedic texts describe the volume of body constituents in terms of Anjali. For example, Charaka prescribes nine Anjali for rasa (nutrient fluid), eight for Rakta (blood), ten for Mamsa (muscle), two for meda (fat), one for Majja (bone marrow), and half for shukra and Ojas. Sushruta and Vagbhata reiterate these proportions.

The primary purpose of these measures is diagnostic and prognostic. Deviations in the volumes of dhatus indicate imbalance and predisposition to disease. Excess meda may reflect obesity, whereas reduced Rakta could signify anaemia or haemorrhagic conditions. Ojas, the essence of vitality, when diminished, signals potential compromise in immunity and resilience.

Through Swa Anjali Pramana, each individual's measurements are self-referential, ensuring that evaluations are contextualized to their own constitution. This approach is distinct from modern standardized anthropometry, which applies fixed norms across populations. Ayurveda employs Swa Anjali to determine appropriate food intake. The quantity of solid and liquid food is often specified in Anjali units to ensure proportionality with the individual's digestive capacity⁶. This practice reflects an understanding that both quantity and quality of

food influence physiological balance.

Modern nutritional science seeks similar personalization through calculations based on basal metabolic rate, caloric requirements, and macronutrient distribution. However, these require technical measurements and calculations, whereas Swa Anjali provides a simple, intuitive, and readily accessible method for daily dietary regulation.

In Ayurvedic therapeutics, Swa Anjali Pramana guides the administration of medicines and procedural interventions. For instance, the volume of medicated oil for internal oleation (snehapana), decoctions for therapeutic enemas (Basti), or ghee for nourishment is determined in Anjali units⁷. This ensures individualized dosing: larger individuals receive proportionately greater volumes, while smaller individuals are not overburdened. Modern clinical practice similarly individualizes drug dosing based on body weight or surface area, but the simplicity and immediacy of Swa Anjali make it a practical model for both home-based care and clinical use⁸.

Swa Anjali Pramana also carries prognostic value. Deviations from normative Anjali volumes in key tissues may indicate potential health risks. For example, reduction in Ojas volume suggests weakened immunity, while excessive meda may signal chronic metabolic disturbances⁹. Unlike modern anthropometry, which primarily describes current physical status, Swa Anjali allows the practitioner to anticipate physiological imbalance and intervene early.

Anjali Pramana Of Body Constituents ¹⁶

Tissue / Fluid	Anjali Measurement
Water (Udaka): In Ayurveda, Water (Udaka) refers to the body's fundamental fluid element, which is present throughout all tissues and organs. It is not just drinking water, but rather the aqueous component that mixes with other substances. For example, it is the liquid seen with stool during diarrhea and is also a key part of urine, blood, and other bodily tissues. Udaka is considered to be spread all over the body, with a primary connection to the skin. Beneath the skin, it exists as lymph (<i>lasika</i>), which is the fluid that seeps from wounds or ulcers. When the body's temperature rises, this same water element is released through the pores of the skin as sweat	10 Anjali
Rasa (Ahara Rasa)	9 Anjali
Blood (Shonita)	8 Anjali
Stool (Purisha)	7 Anjali
Kapha (shleshma)	6 Anjali
Pitta	5 Anjali
Urine (Mutra)	4 Anjali
Muscle fat (Vasa)	3 Anjali
Fat (Meda)	2 Anjali
Bone marrow (Majja)	1 Anjali
Brain (Mastiska)	½ Anjali
Semen (Shukra)	½ Anjali
Secondary Kapha	½ Anjali
Ojas (Apara)	½ Anjali
Ojas (Para)	8 Bindu (drops)

Anthropometry, the science of measuring the human body, provides standardized parameters for health evaluation. Height, weight, BMI, WHR, skinfold thickness, and MUAC are routinely employed in clinical and public health settings^{10,11}. These measures are essential for population-level assessments, growth monitoring, and risk prediction. However, their reliance on fixed standards limits their applicability in accounting for individual variability. Ethnic, genetic, and environmental differences can lead to misclassification when standard cut-offs are applied universally¹². This limitation highlights the relevance of a personalized measure like Swa Anjali.

The principles of Swa Anjali have parallels in modern anthropometry. Blood volume, muscle mass, and fat distribution, while quantified using scientific instruments today, correspond conceptually to Anjali measures of Rakta, Mamsa, and meda¹³. By using one's own hands as the unit of measurement, Ayurveda effectively creates an

individualized scale, much like body surface area or weight-adjusted metrics in contemporary medicine. Nutritional intake, therapeutic dosages, and physiological evaluation can therefore be naturally calibrated using Swa Anjali, ensuring proportion and balance.

Despite Its Historical Significance, Research On Swa Anjali Is Limited. Future Studies Could Focus On:

Establishing standardized techniques for measuring Swa Anjali.

Correlating Anjali volumes with modern physiological parameters such as blood volume, lean body mass, and fat percentage.

Evaluating the predictive value of Swa Anjali for nutritional status, growth, and disease risk.

Integrating Swa Anjali with modern anthropometric tools to develop hybrid models of personalized health assessment¹⁴.

Such research would provide scientific validation to this traditional practice and bridge the gap between Ayurvedic wisdom and modern clinical science.

DISCUSSION

The concept of Swa Anjali Pramana is one of the most innovative aspects of Ayurvedic measurement systems, providing a personalized and context-specific method for evaluating human body dimensions. Unlike conventional anthropometric measures, which rely on external tools, scales, and population-based norms, Swa Anjali uses the individual's own body as a reference point, thereby inherently accounting for genetic, constitutional, and environmental variability. This principle of self-referential measurement ensures that the assessment is tailored to the person, a perspective that modern medicine is only now beginning to appreciate through concepts of personalized nutrition, individualized drug dosing, and precision medicine.

One of the central strengths of Swa Anjali lies in its holistic approach. In Ayurveda, the body is not seen as a collection of isolated organs or tissues but as an integrated system of interdependent constituents (dhatus), channels (srotas), and vital energies (doshas). Each dhatu, whether it is Rakta (blood), Mamsa (muscle), meda (fat), Majja (bone marrow), or Ojas (vital essence), has its own functional and volumetric significance. By measuring these in units relative to the individual's own Anjali, practitioners are able to assess not just quantity but also proportionality, symmetry, and balance. For instance, an excess of meda relative to Mamsa may indicate predisposition to metabolic disorders, while a depletion of Rakta Anjali could reflect an anaemic state. Such observations allow practitioners to intervene preventively, offering dietary, lifestyle, or therapeutic measures before clinical manifestations occur.

From a physiological perspective, Swa Anjali Pramana provides a bridge between traditional and modern understandings of body composition. Modern anthropometry uses tools such as skinfold callipers, bioelectrical impedance, dual-energy X-ray absorptiometry (DEXA), and imaging techniques to quantify lean body mass, fat percentage, and tissue volumes. While precise, these measures often require specialized equipment, trained personnel, and standardized protocols, making them less accessible in everyday practice or low-resource settings. Swa Anjali, by contrast, is inherently simple, cost-free, and reproducible, requiring only the individual's own hands. It is remarkable that Ayurveda, thousands of years ago, developed a system that addresses the modern challenge of accessible, personalized anthropometry.

Another key aspect of discussion involves the prognostic implications of Swa Anjali Pramana. Classical texts emphasize that imbalances in dhatu volumes are early indicators of potential morbidity. For example, reduction in Ojas Anjali suggests compromised immunity and vitality, while disproportionate meda Anjali may indicate susceptibility to obesity-related complications. These predictive capacities are particularly noteworthy, as modern anthropometry is largely descriptive, often assessing risk only after deviation from normative standards becomes clinically apparent. In this sense, Swa Anjali provides a preventive dimension, allowing practitioners to identify subtle imbalances and intervene proactively.

The discussion of Swa Anjali also benefits from a philosophical

perspective. Ayurveda recognizes the human body as a microcosm reflecting universal principles. The practice of measuring one's own body using Swa Anjali embodies the philosophical tenets of Loka-Purusha Samya (the macrocosm-microcosm relationship) and Samanya-Vishesha (principle of similarity and difference). By calibrating all assessments relative to the individual, the approach acknowledges the inherent variability in human constitutions while maintaining the broader principles of balance and harmony that govern health. This philosophical underpinning provides depth to the practice, making it not only a tool of measurement but also an instrument of self-awareness and holistic well-being.

Integration with modern research further strengthens the relevance of Swa Anjali. Studies have attempted to correlate Anjali measurements with parameters such as BMI, lean body mass, fat distribution, and blood volume. While these studies are preliminary, they indicate that Swa Anjali can serve as a rapid, field-friendly anthropometric measure. For instance, measuring meda and Mamsa Anjali could provide immediate insight into body fat and muscle mass distribution. Furthermore, its use in nutritional counselling could help tailor caloric intake and macronutrient distribution to the individual, supporting the global trend toward precision nutrition.

The limitations of Swa Anjali, however, must be acknowledged. Being a self-referential measure, it is influenced by hand size, technique, and user consistency. Variations in the way the palms are joined, the depth of the cavity formed, and even transient changes in muscle or fat tissue can introduce variability. Standardizing measurement protocols, possibly through training or calibration against objective measures, could address these challenges. Additionally, while Swa Anjali captures volumetric proportions, it does not directly quantify biochemical or metabolic parameters, which are often necessary for a complete clinical assessment. Therefore, Swa Anjali is best viewed as a complementary tool rather than a replacement for modern diagnostic techniques.

The discussion of Swa Anjali also highlights its potential for future research and clinical integration. Potential areas include: correlating Anjali volumes with modern body composition metrics, validating predictive accuracy for nutritional and metabolic outcomes, developing standardized measurement guidelines, and exploring its use in personalized therapeutic planning. Additionally, integrating Swa Anjali with digital health tools or wearable technology could modernize its application while preserving the principle of individualized assessment. Such integrative research would honour the traditional wisdom of Ayurveda while advancing its relevance in contemporary medicine.

The analysis of various anthropometric measurements, including length, width, Swa Anjali dimensions, and related parameters, reveals significant gender-based differences in most cases. Boys consistently exhibit larger dimensions than girls, with statistically significant differences ($p < 0.05$) observed in length, width, Swa Anjali measurements, and interphalangeal thumb distances. However, a few parameters, such as the width from the distal 2nd metacarpal and index finger width, did not show significant variation, indicating some similarities between genders.¹⁵

Finally, the discussion underscores the integration of traditional knowledge with modern science. While modern anthropometry provides precise numerical data, it often lacks contextualization with individual physiology and constitutional differences. Conversely, Swa Anjali offers proportional, constitution-specific insight but may lack absolute precision. Combining these approaches can create a synergistic framework: using Swa Anjali for initial assessment, guidance of dosage and nutrition, and early risk identification, while applying modern methods for detailed quantification and monitoring. Such integration could enhance preventive, diagnostic, and therapeutic outcomes, bridging the gap between ancient wisdom and contemporary science.

CONCLUSION

Swa Anjali Pramana represents an innovative and personalized approach to human measurement. It embodies the Ayurvedic principles of proportionality, self-reference, and holistic evaluation. Its applications in dietary regulation, therapeutic dosing, and prognostic assessment demonstrate its continued relevance.

By complementing modern anthropometry with the individualized

framework of Swa Anjali, healthcare can move closer to truly personalized medicine. Future research and integration of these approaches have the potential to enhance both preventive and therapeutic strategies in contemporary practice.

In conclusion, the discussion reveals that Swa Anjali Pramana is not merely a historical curiosity but a practical, adaptable, and conceptually robust tool. Its principles of personalization, proportionality, and preventive focus make it highly relevant to modern health care. By acknowledging its strengths and addressing its limitations, researchers and clinicians can leverage Swa Anjali to enhance anthropometric assessment, nutritional planning, therapeutic dosing, and prognostic evaluation. Its integration with modern methodologies holds promise for advancing personalized medicine, supporting preventive strategies, and honouring the enduring relevance of Ayurvedic wisdom in healthcare.

REFERENCES

- Sharma PV. Charaka Samhita. Varanasi: Chaukhambha Orientalia; 2014.
- Murthy KRS. Sushruta Samhita. Varanasi: Chaukhambha Orientalia; 2012.
- Park K. Textbook of Preventive and Social Medicine. 25th ed. Jabalpur: Banarsidas Bhanot; 2019.
- Shastri AD. Sushruta Samhita. Varanasi: Chaukhambha Sanskrit Sansthan; 2012.
- Murthy KRS. Ashtanga Hridaya. Varanasi: Chaukhambha Krishnadas Academy; 2018.
- Tiwari PV. Ayurvediya Aahar Vigyana. Varanasi: Chaukhambha; 2005.
- Lad V. Textbook of Ayurveda: Fundamental Principles. Albuquerque: Ayurvedic Press; 2002.
- Mosteller RD. Simplified calculation of body-surface area. *N Engl J Med*. 1987;317:1098.
- Patwardhan B, et al. Ayurveda and prognostic indicators. *J Ayurveda Integr Med*. 2010;1(1):11–20.
- Ulijaszek SJ, Mascie-Taylor CG. Anthropometry: The Individual and the Population. Cambridge: Cambridge University Press; 1994.
- WHO Expert Consultation. Waist circumference and waist–hip ratio: Report of a WHO expert consultation. Geneva: WHO; 2008.
- WHO. Appropriate body-mass index for Asian populations and its implications for policy. *Lancet*. 2004;363:157–63.
- Guyton AC, Hall JE. Textbook of Medical Physiology. 13th ed. Philadelphia: Elsevier; 2016.
- Patil V, et al. Future prospects of Ayurvedic anthropometry. *J Ethnobiol Ethnomed*. 2017;13:65.
- Dr. Meghna V. Nikam, Dr. Suvama P. Shelar. AN OBSERVATIONAL STUDY OF SWA-ANJALI PRAMANA IN HEALTHY INDIVIDUALS TO DETERMINE THE RANGE OF ANTHROPOMETRIC MEASUREMENT –PILOT STUDY. *Int J Environ Sci*. 2025;11(1):15-21
- Agnivesha. Vaidya Jadhavji Trikamji Acharya, editor. Charaka Samhitha revised by Charaka and Dridhabala with Sri Chakrapani Datta Ayurvedadipika Commentary in Sanskrit. 5th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2008. Pp-738, p- 279.