



## THE 5M PATHWAY TO GRACEFUL AGEING: AN INTEGRATED APPROACH THROUGH *AYURVEDA* AND *YOGA*

<sup>1</sup>Kiran K Prasad

<sup>2</sup>Shalinee Kumari Mishra

<sup>1</sup>PhD Scholar, Department of Swasthavritta, Institute of Teaching and Research in Ayurveda, Jamnagar

<sup>2</sup>Associate Professor, Department of Swasthavritta, Institute of Teaching and Research in Ayurveda, Jamnagar

<https://doi.org/10.70057/ijaar.2026.70608>

### ABSTRACT

**Introduction:** Geriatric healthcare is increasingly viewed as a multidimensional challenge requiring holistic and integrative strategies. The 5M framework—Mind, Mobility, Medications, Multi-complexity and What Matters Most—provides a patient-centered structure in modern geriatrics. Ayurveda, through *Dinacharya* (daily regimen), *Rasayana Chikitsa* (rejuvenation therapy) and *Vayasthapana* (age-sustaining therapy) interventions, along with *Yoga*'s multidimensional practices, offers potential contributions to each of these domains. **Aim:** To propose an integrative framework for graceful ageing by aligning the geriatric 5M pathway with Ayurvedic and Yogic approaches. **Objective:** To explore how Ayurveda and *Yoga* principles can address each domain of the 5M model to meet the multidimensional health needs of the elderly. **Materials and Methods:** Relevant literature was retrieved from PubMed, PMC, SpringerLink, and ScienceDirect, including RCTs, systematic reviews, meta-analyses, and study protocols related to Ayurveda, *Yoga* and geriatric health. Evidence was thematically analyzed and mapped to the geriatric 5M domains. **Results:** *Smritibhramsha* (cognitive decline) may be addressed through *Medhya Rasayanas* (cognition-enhancing rejuvenatives), *Dhyana* (meditation), *Pranayama* (yogic breath regulation), and mindful *Yoga*, supporting the Mind domain. Mobility issues can be improved through *Dinacharya* practices like *Abhyanga* (therapeutic oil massage) and *Yogasanas* (*Yoga* postures) that enhance flexibility and neuromuscular coordination. Ayurveda's rational pharmacology and *Yoga* as a non-pharmacological adjunct may help reduce polypharmacy under Medications. Multi-complexity is addressed through *Prakriti*-based (individual constitution-based) care and *Tridosha* (three functional principles) concepts, while *Yoga* promotes systemic balance and stress reduction. What Matters Most is supported through emphasis on *Swasthya Rakshana* (health preservation), spiritual well-being, and alignment with patient goals. **Conclusion:** Integrating the 5M model with Ayurveda and *Yoga* offers a synergistic, patient-centered framework that may strengthen geriatric care by bridging traditional wisdom with modern healthcare priorities.

**Key-words:** 5M pathway, *Ayurveda*, Geriatrics, Healthy Ageing, *Rasayana*, *Yoga*

**INTRODUCTION:** The pace of population ageing is much faster than in the past. Globally it is estimated that by 2050, 80% of older people will be living in low- and middle-income countries.<sup>1</sup> Due to the rapid changes in biological processes, functional capacity (including frailty and independence), cognitive status, social factors such as isolation and weakened support networks, along with the presence of multiple health issues, geriatric healthcare has become increasingly important. To address these challenges, geriatric health providers focus on the 5M pathway or framework, emphasizing key target areas—Mind, Mobility, Medications, Multi-complexity and what Matters Most—as a comprehensive approach.<sup>2</sup>

*Ayurveda* identifies the geriatric stage as *Jaravastha* primarily associated with *Vata Dosha* aggravation, leading to degenerative changes in the body.<sup>3</sup> This stage is characterized by a decrease in *Dhatus* (body tissues), weakening of *Agni* (digestive fire), reduced *Sarira Bala* (physical strength), diminished *Indriya Bala* (sensory strength) along with *Smṛtibhramsa* (impaired memory).<sup>4</sup> The science of *Yoga* complements this understanding by viewing ageing as the gradual decline of vitality caused by disturbances in *prāṇa* leading to progressive degeneration of body and mind. *Ayurveda* through its principles of *Rasayana Chikitsa* (rejuvenation therapy), *Vayasthapana* (age-sustaining interventions), *Dinacharya* (daily regimen), *Ritucharya* (seasonal regimen), and appropriate dietary practices together with *Yoga's* multidimensional approaches including modified *Asanas* (postures),

*Pranayama* (breath regulation) and meditative techniques, offers unique contributions to each domain of the 5M framework in geriatrics.<sup>5</sup>

## **MATERIALS AND METHODS**

A comprehensive review was undertaken to examine the role of Ayurveda and Yoga in geriatric health and to systematically align the available evidence with the geriatric 5M framework. Relevant scientific literature was retrieved from four major electronic databases: PubMed, PubMed Central (PMC), SpringerLink, Science Direct and Google Scholar. The search strategy incorporated a combination of keywords and indexed terms related to *Ayurveda*, *Yoga*, *Rasayana*, healthy ageing, geriatrics, frailty, cognitive decline, mind, mobility, polypharmacy, quality of life, and integrative medicine. Boolean operators (AND/OR) were used to refine and combine search terms to ensure comprehensive coverage of relevant publications.

The review included randomized controlled trials (RCTs), systematic reviews, meta-analyses and published study protocols focusing on geriatric populations. Articles addressing *Ayurvedic* interventions and *Yoga*-based interventions in older adults were considered. Only peer-reviewed articles published in English were included. Editorials, opinion articles, and studies lacking methodological clarity were excluded.

Titles and abstracts were screened initially to determine relevance, followed by full-text review of potentially eligible studies. Relevant data were searched systematically, including study design, type and duration of intervention, outcome measures and key findings. The extracted

evidence was subjected to thematic analysis and subsequently mapped to the geriatric 5M framework.

### Mind

Cognitive decline, insomnia, depression, anxiety and social isolation are common mental challenges in older age. Although psychological disorders are prevalent in the elderly, they often go unnoticed and remain untreated. This leads to functional impairment, hampers rehabilitation, increases the burden on the healthcare system and significantly reduces the quality of life in older adults.<sup>6,7</sup>

According to classical *Ayurvedic* descriptions of aging, the fourth and ninth decades of life are characterized by a gradual decline in cognitive faculties such as *Medha* (intellectual grasp) and *Buddhi* (discriminative wisdom).<sup>8</sup> Therefore, *Medhya Rasayanas* like *Guduchi* (*Tinospora cordifolia*), *Shankhapushpi* (*Convolvulus pluricaulis*), *Mandukaparni* (*Centella asiatica*), *Yashtimadhu* (*Glycyrrhiza glabra*), and *Brahmi* (*Bacopa monnieri*)<sup>9</sup> become especially essential in the elderly, as they function as potent brain tonics that enhance psychological faculties. However, cognitive deterioration in the elderly is not solely attributable to aging-related degeneration. Ayurveda recognizes *Nidranasha* (insomnia) as an important contributing factor, particularly due to aggravated *Vata*, which predominates in

old age. Disturbed sleep further exacerbates memory impairment and increases risk of dementia.<sup>10</sup> Therefore, preservation of sleep becomes an integral component of comprehensive geriatric management aimed at sustaining mental faculties. In the management of *Nidranasha*, procedures such as *Shiroabhyanga* and *Padabhyanga* are advocated.<sup>11,12</sup> *Abhyanga* refers to the application of medicated oil tailored according to an individual's *Prakriti*, *Vaya*, *Ritu* and *Rogavastha*. These procedures, described under *Dinacharya* are considered beneficial in inducing sound sleep. Medicated oils such as *Chandanaadi Taila* or *Ksheerabala Taila* are commonly employed for this purpose.

Mind-focused interventions of *Yoga*—such as mindfulness meditation, breath awareness, and chanting—improve attention span, memory, and emotional regulation.<sup>13</sup> Studies have shown that regular meditation enhances neuroplasticity, thereby supporting cognitive longevity.<sup>14</sup> *Yoga* cultivates resilience and reduces psychological distress, contributing to better mental health and overall quality of life in the elderly.<sup>15</sup> *Pranayama* practices like *Nadisudhi* and *Bhramari pranayama* helps to regulate the sympathetic activity and thereby counteract the common stress response in elderly.<sup>16</sup>

**Table 1. Evidence from Studies on Interventions Supporting “Mind” Domain of the 5M Geriatric Framework**

Sl. No.	Study (Citation)	Study Characteristics (Design, Population & Intervention)	Duration	Key Outcomes Relevant to 5M	Indexed Journal & Notes

1	Kulatunga RD <i>et al.</i> Clinical efficacy of <i>Guduchyadi Medhya Rasayana</i> on senile memory impairment <sup>17</sup>	Randomized controlled clinical trial; elders aged 55–75 yrs (n = 138); <i>Guduchyadi Medhya Rasayana</i> compared with control	3 months	Improvement in short- and long-term memory; reduced stress; antidepressant and anxiolytic effects	<i>AYU: An International Quarterly Journal of Research in Ayurveda</i> (Ayurveda RCT)
2	Chobe S <i>et al.</i> Efficacy of integrated <i>Yoga</i> and <i>Ayurveda Rasayana</i> on cognitive functions in elderly with mild cognitive impairment <sup>18</sup>	Non-randomized three-arm clinical trial; elderly with mild cognitive impairment (mean age ≈63 yrs); <i>Brahmi ghrita</i> vs Integrated <i>Yoga</i> vs combined intervention	8 weeks	Significant improvement in executive function, verbal memory, attention, processing speed, and working memory; combined group showed greatest gains	<i>Journal of Ayurveda and Integrative medicine</i> (PubMed – Indexed Non RCT)
3	Kamini Wasade, A comparative study of <i>ashwagandha churna</i> and <i>padabhyanga</i> in the management of <i>nidranash</i> (insomnia) w.s.r to geriatrics <sup>19</sup>	Comparative clinical trial; adults ≥60 yrs (n = 30); <i>Aswagandha Choorna</i> vs <i>Padabhyanga</i>	4 weeks	Significant improvement sleep quality and duration,	<i>Ayurlog: National Journal of Research in Ayurved Science</i>
4	Akshita <i>et al.</i> Effect of home-based mobile-guided	Randomized controlled trial; elderly hypertensive	24 weeks	Significant reduction in systolic blood pressure;	<i>Annals of Neurosciences</i> (PMC-indexed elderly RCT)

	<i>pranayama</i> and meditation on blood pressure and sleep quality in elderly hypertensives <sup>20</sup>	individuals $\geq 60$ yrs; mobile-guided <i>pranayama</i> and <i>Yoga Nidra</i>		improved sleep quality compared with control	
5	Prashanth S <i>et al.</i> Effects of <i>Yoga</i> on sleep quality among the geriatric population: A systematic review and meta-analysis <sup>21</sup>	Systematic review and meta-analysis of RCTs; older adults $\geq 60$ yrs; <i>Yoga</i> programs including <i>asana</i> and breathwork	Variable	Significant pooled improvement in sleep quality and functional outcomes	<i>Brain Behavior and Immunity Integrative (ScienceDirect)</i> Meta-analysis supporting <i>Yoga</i> for geriatric sleep outcomes

**Mobility:** Physical independence is central to healthy ageing. Loss of balance, flexibility, and muscle strength predisposes older adults to falls and dependency.<sup>22</sup> *Abhyanga* and *Samvahana* mentioned in Ayurveda classics can improve the circulation, muscle strength and helps to relieve pain. Since old age is dominated by *Vata dosha*, *Taila* formulations serve as the foremost (*Agrya*) medicines for its management. Formulations like *Dhanvantaram Taila* and *Mahanarayana Taila* are effective in alleviating joint-related stiffness and enhancing mobility, particularly in *Vata*-dominant musculoskeletal conditions. *Yoga* postures specifically designed for seniors—such as

gentle stretches and *Sukshma Vyayama*, balancing *asanas* and joint-friendly sequences help improve musculoskeletal function and coordination.<sup>23</sup> Full-body stretching exercises such as *Trikonasana*,<sup>24</sup> back and spine stretches like the *Bhujangasan*<sup>25</sup> and balancing *Yogasanas* like *Tadasana*<sup>26</sup> can be effectively advised to enhance mobility. Chair *Suryanamaskara* modified using supports and aids is exclusively designed for the elderly.<sup>27</sup> Regular practice increases joint mobility, strengthens core stability, and reduces the risk of fractures, thus enabling greater independence and confidence in daily life.<sup>28,29</sup>

**Table 2. Evidence from Studies on Interventions Supporting “Mobility” Domain of the 5M Geriatric Framework**

Sl. No.	Study (Citation)	Study Characteristics (Design, Population & Intervention)	Duration	Key Outcomes Relevant to 5M	Indexed Journal & Notes
---------	------------------	---	----------	-----------------------------	-------------------------

1	Sefton <i>et al.</i> Six weeks of massage therapy produces changes in balance, neurological and cardiovascular measures in older persons <sup>30</sup>	Randomized controlled trial; older adults; full-body therapeutic massage administered weekly	6 weeks	Immediate and sustained improvements in postural stability and balance compared with control	<i>Journal of Bodywork and Movement Therapies</i> (PubMed-indexed); supports Mobility (balance, falls risk)
2	Groessler <i>et al.</i> Yoga to prevent mobility limitations in older adults: RCT feasibility <sup>31</sup>	Randomized controlled feasibility trial; sedentary adults aged 60–89 yrs (n ≈ 46); gentle Hatha Yoga vs health education	10 weeks	Improvements in balance, gait, and strength; effect sizes suggest mobility benefit	<i>BMC Geriatrics</i> (SpringerLink); pilot RCT, feasibility and safety outcomes
3	Kelley <i>et al.</i> Effect of therapeutic Yoga on mobility and gait in older adults <sup>32</sup>	Quasi-experimental pre-post study; community-dwelling older adults (mean age ≈72 yrs); therapeutic Yoga (60 min, twice weekly)	12 weeks	Increased normal and fast gait speed; improved Timed Up and Go and postural control	<i>Journal of Alternative and Complementary Medicine</i> (PMC-indexed); mobility and gait outcomes
4	Tew <i>et al.</i> Adapted Gentle Years Yoga pilot: Physical function in inactive older adults <sup>33</sup>	Randomized pilot trial; physically inactive adults ≥60 yrs; adapted Gentle Years Yoga focusing on strength and balance	~10–12 weeks	Improvements across physical function and mobility-related outcome measures	<i>BMC Geriatrics</i> (SpringerLink); pilot RCT with functional mobility endpoints
5	Kadachha <i>et al.</i> Effects of Yogasana on	Randomized clinical trial; healthy elderly	6 weeks	Significant improvement in balance	<i>International Journal of Physiotherapy</i>

balance and mobility in elderly <sup>34</sup>	≥60 yrs (n = 60); <i>Yogasana</i> practice 6 days/week	(Berg Balance Scale) and reduced Timed Up and Go time	<i>and Research</i> (IJMHR); experimental trial using mobility proxies
---	--	---	--

**Medications:** Polypharmacy, or the use of multiple medications, is a significant concern in geriatrics. Polypharmacy often increases the risk of drug interaction, side effects and reduced treatment effectiveness.<sup>35</sup> An increase in the number of medicines often creates confusion regarding the appropriate dosage, a challenge frequently faced by the elderly. Ayurveda treatment principles emphasize addressing the individual as a whole, rather than prescribing multiple medicines for separate diseases. A single medication can be given for more than one disease after considering *Agni*, *Koshta* and *Avastha* of the patient. Network pharmacology analysis of *Chandraprabha Vati* in the treatment of metabolic syndrome supports this principle.<sup>36</sup> By correcting the deranged *dosha* and designing therapy accordingly,

comorbidities can be treated more effectively, thereby reducing polypharmacy and minimizing reliance on purely symptomatic management. Integrated approach combining *Yoga* with Ayurvedic principles is a highly promising way to reduce the burden of medications for common ailments.

*Yoga*, as a complementary therapy, aids in managing chronic conditions like hypertension, diabetes, arthritis, and respiratory disorders.<sup>37</sup> By improving cardiovascular endurance, metabolic efficiency, and lung capacity, *Yoga* has the potential to reduce the need for multiple medications and their associated side effects.<sup>38,39</sup> This not only lightens the pharmaceutical burden but also improves adherence to necessary treatments.

**Table 3. Evidence from Studies on Interventions Supporting “Medication” Domain of the 5M Geriatric Framework**

Sl. No.	Study (Citation)	Study Characteristics (Design, Population & Intervention)	Comparator & Duration	Medication / Polypharmacy Outcome	Indexed Journals & Notes
1	Manjunath & Telles. Influence of <i>Yoga</i> and Ayurveda on self-rated sleep in a	Randomized controlled trial; elderly residents of an old-age home (≥60 yrs); <i>Yoga</i> ( <i>āsana</i> , relaxation,	Control group; 3 months	Significant reduction in sleep medication use, especially in the <i>Yoga</i> group	<i>The Indian Journal of Medical Research</i> (Pubmed) Demonstrates non-pharmacological

	geriatric population <sup>40</sup>	breathing) and Ayurveda interventions			management of insomnia and supports deprescribing in geriatric care
2	Bankar <i>et al.</i> Impact of long-term <i>Yoga</i> practice on sleep quality and quality of life in the elderly <sup>41</sup>	Interventional cross-sectional study; elderly adults aged $\geq 60$ yrs; long-term regular <i>Yoga</i> practice	Non- <i>Yoga</i> controls; long-term exposure	Lower use of sleep medications among <i>Yoga</i> practitioners compared with controls	The Journal of Ayurveda and Integrative Medicine(J-Aim) Pubmed Supports sustained <i>Yoga</i> practice as a strategy to reduce chronic medication use
3	Balaji & Varne. Effects of yogic practices on polypharmacy <sup>42</sup>	Systematic review; older adults with chronic disorders; <i>Yoga</i> , <i>prāṇāyāma</i> , and meditation	Conventional care; not applicable	Literature indicates reduced number and dosage of medications across multiple chronic conditions	<i>Indian Journal of YOGA Exercise &amp; Sport Science and Physical Education.</i> Conceptual and evidence-based support for <i>Yoga</i> in reducing polypharmacy

**Multi-complexity:** Elderly populations often face multimorbidity, where multiple health conditions coexist, complicating care and management. Observing *Sadvritta* along with *Yama* and *Niyama* promotes mental discipline, emotional stability, and positive social behaviour, which are essential for healthy ageing. Adopting *Aachara rasayana* further enhances psychological well-being and strengthens social and spiritual health. In addition, *Rasayana* therapy may be conceptualized

as a form of immunomodulation, promoting non-specific enhancement of host defense mechanisms and strengthening overall systemic resilience.<sup>43</sup> Adopting these principles from an early age can help to prevent the development of multiple comorbidities that are commonly seen in the elderly.

*Yoga*, being systemic in its benefits, offers an integrative strategy by promoting homeostasis and reducing physiological stress. Practices of deep relaxation and

regulated breathing lower cortisol levels, improve immune function, and support restorative sleep. These effects enable better adaptability in the face of multiple health challenges, making *Yoga* a valuable non-pharmacological intervention for complex geriatric care.

Ayurveda recognizes that with advancing age (*Jara avastha*), there is a natural decline in *Ojas*, weakening of *Agni*, and aggravation of *Vata*, which collectively reduce immunity and increase susceptibility to chronic inflammatory disorders and systemic illnesses.<sup>44</sup> Elderly individuals with chronic conditions often

exhibit overlapping pathologies, such as cardiovascular diseases, metabolic syndromes, degenerative disorders, and cognitive decline.

Adopting Ayurvedic dietary principles, along with *Ritusodhana*, *Rasayana therapy* and the regular practice of *Yama*, *Niyama*, and *Sadvritta* from an early age, can significantly help to prevent diseases in old age. Based on the patient's *Rogi bala*, *Roga bala*, and *Satva bala*, the appropriate adoption of *Pathya-Apathya*, *Rasayana therapy*, and yogic principles can significantly reduce the burden of comorbidities

**Table 4. Evidence from Studies on Interventions Supporting “Multicomplexity” Domain of the 5M Geriatric Framework**

Sl. No.	Study (Citation)	Study Characteristics (Design, Population & Intervention)	Duration	Multi-complexity / Global Health Outcomes	Indexed Journal & Notes
1	Mundada <i>et al.</i> (2024). Effectiveness of Ayush Rasayana A and B on quality of life of older adults <sup>45</sup>	Cluster randomized controlled trial (open-label, multicenter); ambulatory adults aged 60–75 yrs (n = 720), with or without stable medications; Ayush Rasayana A (6 days) followed by Ayush Rasayana B (84 days) with ancillary Ayurvedic care	3 months	Multidomain quality-of-life and health outcomes addressing multi-complexity	<i>JMIR Research Protocols</i> (PMC); large-scale protocol targeting multidimensional ageing outcomes

2	Tew <i>et al.</i> <i>Yoga</i> for older adults with multimorbidity (Gentle Years <i>Yoga</i> Trial): study protocol <sup>46</sup>	Pilot randomized controlled feasibility trial; adults $\geq 65$ yrs with $\geq 2$ chronic conditions; Gentle Years <i>Yoga</i> program vs usual care	12 weeks (pilot; extended follow-up planned)	Feasibility, acceptability, and preliminary improvement in health-related quality of life (EQ-5D-5L)	<i>Trials</i> (Springer NatureLink); protocol and feasibility outcomes for multimorbidity
3	Hariprasad <i>et al.</i> (2013). <i>Yoga</i> -based intervention in residents of elderly homes <sup>47</sup>	Randomized clinical trial; elderly home residents; <i>Yoga</i> intervention vs wait-list control	12 weeks	Improvements in cognitive function (attention, memory), contributing to broader mental and functional health	<i>Indian Journal of Psychiatry</i> (PMC); elderly-focused RCT
4	Sivaramakrishnan <i>et al.</i> Effects of <i>Yoga</i> on physical function and health-related quality of life in older adults <sup>48</sup>	Systematic review and meta-analysis of randomized controlled trials; adults aged $\geq 60$ yrs; various <i>Yoga</i> interventions	Varied	Small-to-moderate improvements in depression, perceived physical and mental health, sleep quality, and vitality	<i>International Journal of Behavioral Nutrition and Physical Activity</i> (SpringerLink); high-level evidence
5	Tew, G. A. <i>et al.</i> Chair-based <i>Yoga</i> programme for older adults with multimorbidity <sup>49</sup>	Pragmatic randomized controlled trial; adults $\geq 65$ yrs with $\geq 2$ chronic conditions; Gentle Years Chair-based <i>Yoga</i> plus usual care vs usual care alone	12 weeks (with 12-month follow-up)	Primary outcome: health-related quality of life (EQ-5D-5L); mixed but clinically relevant results	<i>BMJ / British Journal of General Practice</i> (PubMed); multimorbidity-focused pragmatic RCT

**What matters more:** Reflective practices such as *Svadhya* (self-study) and guided journaling contribute to psychological well-being and cognitive clarity. Guided journaling refers to a structured reflective writing process in which individuals respond to specific prompts designed to encourage self-awareness, emotional processing, and behavioral insight. This practice facilitates introspection, supports mental organization, and enhances clarity of thought, thereby complementing the traditional concept of *Svadhya*. Beyond medical care, ageing individuals seek dignity, autonomy, and meaning in life. *Yoga* nurtures self-awareness, spiritual well-being, and acceptance of life's transitions. Through contemplative

practices, seniors can connect with their inner values, fostering peace and purpose. *Yoga* thus directly addresses “What Matters Most” by aligning health strategies with personal priorities, ensuring that care extends beyond disease management to embrace quality of life.

Weightage must be given to the autonomy of the individual by creating a favourable environment that supports their preferences, fostering hobbies such as gardening, mild outdoor activities, and opportunities to gather and interact with friends and family members. Honouring one's personal goals and values significantly enhances overall quality of life

**Table 5. Evidence from Studies on Interventions Supporting “What matters more ” Domain of the 5M Geriatric Framework**

Sl. No.	Study (Citation)	Study Characteristics (Design, Population & Intervention)	Duration / Follow-up	Key “What Matters Most” Outcomes	Indexed Journal & Notes
1	Condon <i>et al.</i> Cultivating an attitude of gratitude: A brief gratitude intervention for older adults with chronic pain <sup>50</sup>	Feasibility and effectiveness study; older adults with chronic pain; daily gratitude journaling	2 weeks	Improved gratitude, psychological well-being, and psychosocial outcomes reflecting personal values and meaning	<i>Innovation in Aging</i> (PMC); patient-centered psychosocial intervention
2	Sharif <i>et al.</i> Effectiveness of life review therapy on	Randomized controlled intervention; elderly participants in	Follow-up at 1 and 3 months	Significant improvement in overall quality of life	<i>International Journal of Community Based Nursing and Midwifery</i> (PMC)

	quality of life in late life <sup>51</sup>	day-care centers; structured life-review therapy		following intervention	
3	Oken <i>et al.</i> Randomized controlled six-month trial of <i>Yoga</i> in healthy seniors <sup>52</sup>	Randomized controlled trial; healthy adults aged 65–85 yrs (n = 135); Hatha <i>Yoga</i> classes plus home practice vs walking and wait-list	6 months	Significant improvement in SF-36 quality-of-life domains including vitality, energy/fatigue, and well-being	<i>Journal of Alternative and Complementary Medicine</i> (PubMed)
4	Hassan <i>et al.</i> Effects of an integrated <i>Yoga</i> program on quality of life, spinal flexibility, and strength in older adults <sup>53</sup>	Randomized controlled trial; community-dwelling adults aged 60–75 yrs; integrated <i>Yoga</i> (āsana, prāṇāyāma, meditation) vs wait-list	3 months	Older People’s Quality of Life (OPQOL) scores significantly higher in <i>Yoga</i> group	<i>Advances in Mind Body Medicine</i> (PubMed)
5	Hariprasad, V. R. <i>et al.</i> Effects of <i>Yoga</i> intervention on sleep and quality of life in elderly <sup>54</sup>	Randomized controlled study; elderly residents of old-age homes (≥60 yrs); daily supervised <i>Yoga</i> transitioning to home practice	Up to 6 months	Significant improvement in WHOQOL-BREF total and domain scores; improved sleep quality	<i>Indian Journal of Psychiatry</i> (PubMed)

**DISCUSSION:** The present synthesis highlights the relevance and applicability of *Ayurveda* and *Yoga* interventions within the contemporary 5M Geriatric Framework, demonstrating their multidimensional benefits across cognitive, physical, psychosocial, and pharmacological domains of ageing. Evidence mapped to the Mind domain indicates consistent

improvements in cognition, sleep quality, and psychological well-being through interventions such as *Medhya Rasayana*, *Padabhyanga*, *Pranayama*, meditation and integrated *Yoga* programs. Randomized controlled trials and systematic reviews included in this review report improvements in memory, executive function, sleep parameters, and stress-

related outcomes, underscoring the role of non-pharmacological approaches in addressing mentation-related concerns in older adults. Similarly, studies aligned with the Mobility domain reveal that *Yoga*-based practices—ranging from gentle *Hatha Yoga*<sup>55</sup> and chair-based adaptations to structured therapeutic *Yoga* programs<sup>56</sup>—significantly enhance balance, gait speed, postural stability, and functional mobility, thereby addressing fall risk and promoting independence. These findings support the traditional yogic emphasis on *Sukshma vyayama*, joint-friendly asanas, and balance-oriented practices, while also aligning with geriatric priorities of preserving physical function and autonomy.

Importantly, the evidence also supports *Ayurveda* and *Yoga* as effective strategies within the Medications and Multi-complexity domains, addressing one of the most pressing challenges in geriatric care—polypharmacy. Studies demonstrate reduced reliance on sleep medications, improved management of chronic lifestyle disorders, and the potential for deprescribing through sustained *Yoga* practice and individualized *Ayurvedic* interventions. The multi-target therapeutic principle of *Ayurveda*, supported by network pharmacology analyses of formulations such as *Chandraprabha Vati*, provides a plausible mechanistic basis for managing comorbidities with fewer medications by addressing underlying *dosha* imbalance rather than isolated symptoms.<sup>57</sup> Furthermore, large randomized trials, pilot feasibility studies, and meta-analyses mapped to the Multi-complexity and What Matters Most domains consistently report improvements

in health-related quality of life, vitality, psychological well-being, social functioning, and patient-centered outcomes such as meaning, gratitude, and life satisfaction. Together, these findings suggest that an integrated *Ayurveda–Yoga* approach is uniquely positioned to operationalize the 5M framework by addressing biological, functional, psychological, and existential dimensions of ageing, thereby offering a holistic, person-centered, and sustainable model of geriatric care. Future large-scale pragmatic trials and meta-analyses are warranted to further quantify effect sizes and strengthen the evidence base for integration into mainstream geriatric practice.

#### CONCLUSION:

The 5M framework provides a structured, patient-centered model for addressing geriatric challenges, while *Yoga* offers a practical, holistic tool that complements this approach. By enhancing mind health, promoting mobility, reducing medication reliance, addressing multi-complexity, and aligning care with personal values, *Yoga* empowers older adults to age gracefully with resilience and dignity. The integration of *Yoga* into geriatric healthcare pathways represents a safe, accessible, and cost-effective strategy to promote healthy ageing in modern society.

#### REFERENCES

1. World Health Organization. Ageing and health [Internet]. Geneva: World Health Organization; 2025 [cited 2026 Jan 4]. Available from: <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health>
2. Molnar F, Frank CC. Optimizing geriatric care with the geriatric 5Ms. *Can Fam Physician*. 2019;65(1):39.

3. Sastri Paradakara HS, editor. Ashtanga Hridaya of Vagbhata, with the commentary of Sarvangasundara of Arunadatta & Ayurvedarasayana of Hemadri, Sutrasthana, Ch.1, Ver. 8, Varanasi: Chaukhamba Sanskrit Sansthan ;2016. p. 8.
4. Acharya YT, editor. Charaka Samhita of Agnivesha, revised by Charaka and Dridhabala, with the Ayurveda-Dipika commentary of Chakrapanidatta, Vimanasthana, Ch.8, Ver. 122, Varanasi: Chaukhamba Krishnadas Academy ; 2010. p. 280.
5. Taimni IK. The science of *Yoga*. Chennai: The Theosophical Publishing House; 2013. p. 3-12, 215-223.
6. Puyané M, Chabrera C, Camón E, et al. Uncovering the impact of loneliness in ageing populations: a comprehensive scoping review. *BMC Geriatr.* 2025;25:244.doi:10.1186/s12877-025-05846-4.
7. World Health Organization. Mental health of older adults [Internet]. Geneva: WHO; 2025 Oct 8 [cited 2026 Feb 6]. Available from: <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>
8. Murthy PHV, translator. Sarngadhara Samhita. Pratham Khanda. Vol. 6. Varanasi: Chaukhamba Sanskrit Series Office; 2001. p. 56.
9. Acharya YT, editor. Charaka Samhita of Agnivesha, revised by Charaka and Dridhabala, with the Ayurveda-Dipika commentary of Chakrapanidatta, Chikitsasthana, Ch.1.3, Ver.30-31, Varanasi: Chaukhamba Krishnadas Academy ; 2010. p. 385.
10. Shi L, Chen SJ, Ma MY, Bao YP, Han Y, Wang YM, Shi J, Vitiello MV, Lu L. Sleep disturbances increase the risk of dementia: A systematic review and meta-analysis. *Sleep Med Rev.* 2018 Aug;40:4-16. doi: 10.1016/j.smr.2017.06.010. Epub 2017 Jul 6. PMID: 28890168.
11. Acharya YT, editor. Charaka Samhita of Agnivesha, revised by Charaka and Dridhabala, with the Ayurveda-Dipika commentary of Chakrapanidatta, Sutrasthana, Ch.5, Ver. 83, Varanasi: Chaukhamba Krishnadas Academy ; 2010. p. 42.
12. Sharma S, editor. Ashtanga Sangraha of Vrddha Vagbhata, with the Sasilekha commentary by Indu, Sutrasthana, Ch.3, Ver. 31, Varanasi: Chowkhamba Sanskrit Series Office ; 2013. p. 21.
13. Hooi LY, Chen PL, Tan KW, de Vries M, Wong HK. Effects of mindfulness breathing meditation on stress and cognitive functions: a heart rate variability and eye-tracking study. *Sci Rep.* 2025;15(1):37185.doi:10.1038/s41598-025-23727-z.
14. Calderone A, Latella D, Impellizzeri F, de Pasquale P, Famà F, Quartarone A, et al. Neurobiological changes induced by mindfulness and meditation: a systematic review. *Biomedicines.* 2024;12(11):2613. doi:10.3390/biomedicines12112613.
15. Chen Q. Neurobiological and anti-ageing benefits of *Yoga*: a comprehensive review of recent advances in non-pharmacological therapy. *Exp Gerontol.* 2024;196:112550.doi:10.1016/j.exger.2024.112550.
16. Upadhyay J, S NN, Shetty S, Saoji AA, Yadav SS. Effects of Nadishodhana and Bhramari Pranayama on heart rate variability, auditory reaction time, and blood pressure: a randomized clinical trial in hypertensive patients. *J Ayurveda Integr Med.* 2023;14(4):100774. doi:10.1016/j.jaim.2023.100774.

17. Kulatunga RD, Dave AR, Baghel MS. Clinical efficacy of Guduchyadi Medhya Rasayana on senile memory impairment. *Ayu*. 2012;33(2):202-8. doi:10.4103/0974-8520.105239.
18. Chobe S, Patra SK, Chobe M, Metri K. Efficacy of integrated *Yoga* and Ayurveda Rasayana on cognitive functions in elderly with mild cognitive impairment: non-randomized three-arm clinical trial. *J Ayurveda Integr Med*. 2022;13(1):100373.
19. Kamini Wasade KW. A comparative study of ashwagandha churna and padabhyanga in the management of nidranash (insomnia)w.s.r to geriatrics. *Njras* [Internet]. 2020Jan.13[cited2026Mar.4];8(01). Available from: <https://www.ayurlog.com/index.php/ayurlog/article/view/486>
20. Akshita, Pathania M, Kumari R, Dhar M, Bhardwaj P, Ahuja N, et al. Effect of home-based mobile guided pranayama and Yog Nidra meditation on blood pressure and sleep quality of elderly hypertensive individuals: a randomized controlled trial. *Ann Neurosci*. 2025;1-8.
21. Prashanth S, Nalini V, Maheshkumar K, Thanalakshmi J, Priyanka S. Effects of *Yoga* on sleep quality among the geriatric population: systematic review and meta-analysis. *Brain Behav Immun Integr*. 2024;6:100058.
22. Lohne-Seiler H, Kolle E, Anderssen SA, et al. Musculoskeletal fitness and balance in older individuals (65–85 years) and its association with steps per day: a cross-sectional study. *BMC Geriatr*. 2016;16:6.doi:10.1186/s12877-016-01883.
23. Youkhana S, Dean CM, Wolff M, Sherrington C, Tiedemann A. *Yoga*-based exercise improves balance and mobility in people aged 60 and over: a systematic review and meta-analysis. *Age Ageing*. 2016;45(1):21-29.
24. Kumar A, Kapse RC, Paul N, Vanjare AM, Omkar SN. Musculoskeletal modeling and analysis of Trikonasana. *Int J Yoga*. 2018;11(3):201-7. doi:10.4103/ijoy.IJOY\_1\_18.
25. Negi A, Singh G, Pal GS. An anatomical analysis of Bhujangasana and Shalabhasana for comprehensive health. *World J Pharm Res*. 2025;14(2):317-331.
26. Tewari P. *Yoga* asanas for backache. *J Yoga Physiother*. 2019;7:26-32. doi:10.19080/JYP.2019.07.555708.
27. Effect of chair suryanamaskar with strength training on cardiovascular endurance in frail older adults: a randomized controlled trial. *SEEJPH*. 2025;26(S2):4024-4033.
28. Sivaramakrishnan D, Fitzsimons C, Kelly P, Ludwig K, Mutrie N, Saunders DH, et al. The effects of *Yoga* compared to active and inactive controls on physical function and health-related quality of life in older adults: systematic review and meta-analysis of randomised controlled trials. *Int J Behav Nutr Phys Act*. 2019;16(1):33.
29. Zou L, Sasaki JE, Wang H, Xiao J, Shin S. Meta-analysis of the effect of *Yoga* practice on physical fitness in the elderly. *Int J Environ Res Public Health*. 2021;18(21):11663.
30. Sefton JM, Yarar C, Berry JW. Six weeks of massage therapy produces changes in balance, neurological and cardiovascular measures in older persons. *Int J Ther Massage Bodywork*. 2012;5(3):28-40.
31. Groessl EJ, Maiya M, Schmalzl L, Wing D, Jeste DV. *Yoga* to prevent mobility limitations in older adults: feasibility of a randomized controlled trial. *BMC Geriatr*. 2018;18(1):306.

32. Kelley KK, Aaron D, Hynds K, Machado E, Wolff M. The effects of a therapeutic *Yoga* program on postural control, mobility, and gait speed in community-dwelling older adults. *J Altern Complement Med.* 2014;20(12):949-954.
33. Tew GA, Howsam J, Hardy M, Bissell L. Adapted *Yoga* to improve physical function and health-related quality of life in physically inactive older adults: a randomised controlled pilot trial. *BMC Geriatr.* 2017;17(1):131.
34. Kadachha D, Patel P, Shah M. Effect of *Yogasana* on balance and mobility in elderly population. *Int J Physiother Res.* 2016;4(2):1401-1407.
35. Varghese D, Ishida C, Patel P, et al. Polypharmacy. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 [updated 2024 Feb 12]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK532953/>
36. Dongre P, Majumdar A. Network pharmacology analysis of Chandraprabha Vati: a new hope for the treatment of metabolic syndrome. *J Ayurveda Integr Med.* 2024;15(3):100902. doi:10.1016/j.jaim.2024.100902.
37. Stephens I. Medical *Yoga* therapy. *Children* (Basel). 2017;4(2):12. doi:10.3390/children4020012.
38. Moliver N, Mika E, Chartrand M, Burrus S, Haussmann R, Khalsa S. Increased Hatha *Yoga* experience predicts lower body mass index and reduced medication use in women over 45 years. *Int J Yoga.* 2011;4(2):77-86.
39. Pa BR, Varne SR. Effects of yogic practices on polypharmacy. *Indian J Yoga Exerc Sport Sci Phys Educ.* 2023;8(2):1-10.
40. Manjunath NK, Telles S. Influence of *Yoga* and Ayurveda on self-rated sleep in a geriatric population. *Indian J Med Res.* 2005;121(5):683-690.
41. Bankar MA, Chaudhari SK, Chaudhari KD. Impact of long-term *Yoga* practice on sleep quality and quality of life in the elderly. *J Ayurveda Integr Med.* 2013;4(1):28-32.
42. Pa BR, Varne SR. Effects of yogic practices on polypharmacy. *Indian J Yoga Exerc Sport Sci Phys Educ.* 2023;8(2):1-10.
43. Khan S, Dwivedi A, Jaiswal M. The role of Rasayana Kalpana in immunomodulation: A scientific and Ayurvedic review. *J Ayurveda Integr Med Sci.* 2023;10(12). doi:10.21760/jaims.10.12.49.
44. Datta HS, Mitra SK, Paramesh R, Patwardhan B. Theories and management of aging: modern and Ayurveda perspectives. *Evid Based Complement Alternat Med.* 2011;2011:528527. doi:10.1093/ecam/nep005.
45. Mundada P, Makhija D, Mata S, Kachare K, Manathottathil A, Sharma A, et al. Effectiveness of Ayush Rasayana A and B on the quality of life of older adults: protocol for a cluster randomized controlled trial. *JMIR Res Protoc.* 2024;13:e58186.
46. Tew GA, Bissell L, Corbacho B, Fairhurst C, Howsam J, Hugill-Jones J, et al. *Yoga* for older adults with multimorbidity (the Gentle Years *Yoga* Trial): study protocol for a randomised controlled trial. *Trials.* 2021;22(1):269.
47. Hariprasad VR, Koparde V, Sivakumar PT, Varambally S, Thirthalli J, Varghese M, et al. Randomized clinical trial of *Yoga*-based intervention in residents from elderly homes: effects on cognitive function. *Indian J Psychiatry.* 2013;55(Suppl 3):S357-S363.

48. Sivaramakrishnan D, Fitzsimons C, Kelly P, Ludwig K, Mutrie N, Saunders DH, et al. The effects of *Yoga* compared to active and inactive controls on physical function and health-related quality of life in older adults: systematic review and meta-analysis of randomised controlled trials. *Int J Behav Nutr Phys Act.* 2019;16(1):33.
49. Tew GA, Wiley L, Ward L, Huggill-Jones JG, Maturana CS, Fairhurst CM, et al. Chair-based *Yoga* programme for older adults with multimorbidity: RCT with embedded economic and process evaluations. *Health Technol Assess.* 2024;28(53):1-152.
50. Condon S, Cox B, Parmelee P. Cultivating an attitude of gratitude: a brief gratitude intervention for older adults with chronic pain. *Innov Aging.* 2023;7(Suppl 1):799.
51. Sharif F, Jahanbin I, Amirsadat A, Hosseini Moghadam M. Effectiveness of life review therapy on quality of life in the late life at day care centers of Shiraz, Iran: a randomized controlled trial. *Int J Community Based Nurs Midwifery.* 2018;6(2):136-145.
52. Oken BS, Zajdel D, Kishiyama S, Flegal K, Dehen C, Haas M, et al. Randomized, controlled, six-month trial of *Yoga* in healthy seniors: effects on cognition and quality of life. *Altern Ther Health Med.* 2006;12(1):40-47.
53. Ganesh HRS, Subramanya P, Rao RM, Vadiraj HS, Udupa V. Effects of an integrated *Yoga* program on quality of life, spinal flexibility, and strength in older adults: a randomized control trial. *Adv Mind Body Med.* 2022;36(1):22-28.
54. Hariprasad VR, Sivakumar PT, Koparde V, Varambally S, Thirthalli J, Varghese M, et al. Effects of *Yoga* intervention on sleep and quality-of-life in elderly: a randomized controlled trial. *Indian J Psychiatry.* 2013;55(Suppl 3):S364-S368.
55. Grabara M, Szopa J. Effects of hatha *Yoga* exercises on spine flexibility in women over 50 years old. *J Phys Ther Sci.* 2015;27(2):361-5. doi:10.1589/jpts.27.361.
56. Yao CT, Lee BO, Hong H, Su YC. Effect of chair *Yoga* therapy on functional fitness and daily life activities among older female adults with knee osteoarthritis in Taiwan: a quasi-experimental study. *Healthcare (Basel).* 2023;11(7):1024. doi:10.3390/healthcare11071024.
57. Dongre P, Majumdar A. Network pharmacology analysis of Chandraprabha Vati: a new hope for the treatment of metabolic syndrome. *J Ayurveda Integr Med.* 2024;15(3):100902. doi:10.1016/j.jaim.2024.100902

Source of support: Nil

Conflict of interest: None Declared

---

**Corresponding Author:** Dr. Kiran K Prasad, PhD Scholar, Department of Swasthavritta, Institute of Teaching and Research in Ayurveda, Jamnagar  
Email: [drkirankprasad@gmail.com](mailto:drkirankprasad@gmail.com)

---

Cite this Article as: [Kiran K Prasad, Shalinee Kumari Mishra: The 5m Pathway to Graceful Ageing: An Integrated Approach Through Ayurveda and Yoga] *www.ijaar.in: IJAAR VOL 7 ISSUE 6 JAN-FEB 2026* Page No: - 324-340