



GERIATRIC MENTAL HEALTH: A REVIEW OF INTEGRATIVE AYURVEDIC PROTOCOLS

Ayurveda

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ABSTRACT

Geriatric mental health is emerging as a major public health concern due to rising life expectancy and the high burden of depression, anxiety, cognitive decline, and sleep disturbances in late life. Ayurveda conceptualizes many of these conditions under *viśāda*, *chittodvega*, *nīdrānaśa*, and *smṛtibhramśa*, primarily linked with *vāta* predominance, *dhātu kshaya*, and *manovaha srotas dushti* in old age. Dementia and insomnia are described as highly prevalent, multi-factorial disorders in ageing, driven by neurodegenerative changes, sleep-architecture alterations, and modifiable vascular, lifestyle, and psychosocial risk factors. The Ayurvedic approach emphasizes a holistic framework integrating *rasāyana* therapy to promote longevity, enhance *medha*, *smṛti*, and *sattva*, and delay neurodegeneration in the elderly. In addition, *sadvṛtta*, *dinacaryā*, *yoga* and *ritucharya* provide ethical, daily, and seasonal regimens that regulate *nīdrā*, *āhāra*, and *vyāyāma*, thereby reducing allostatic load and preventing progression of *viśāda* and *chittodvega*. Ayurvedic concepts of *jarā*, *dhātu kṣaya*, and *vāta* predominance leading to decline in *medhā*, *smṛti*, and *bala*, and then outlines a multimodal therapeutic framework. Key strategies include personalized *dinacaryā* and *ritucharya*, *sadvṛtta*, and *Ācāra Rasāyana*, *Satvavajaya*, *yoga-vyāyāma*, and carefully selected *pañcakarma* procedures. Together, these interventions aim to stabilize *doṣas*, enhance *ojas* and cognition, regulate sleep, strengthen resilience, and improve quality of life in older adults. The article proposes an integrative protocol that combines Ayurvedic regimens with conventional geriatric psychiatry to prevention and management of mental health disorders in the ageing population.

KEYWORDS

Geriatric mental health, Geriatric anxiety, Geriatric depression, Dementia, Rasāyana therapy, Geriatric Mental Health Protocol

INTRODUCTION

Geriatric mental health focuses on the emotional, cognitive, and psychological well-being of older adults, a population increasingly vulnerable to various mental health challenges due to aging-related biological and social changes. As life expectancy rises, the prevalence of mental health disorders such as depression, dementia, anxiety, and sleep disturbances has also grown, making geriatric mental health a major public health concern. Aging brings about gradual alterations in brain structure and neurochemistry, leading to functional changes across several cognitive domains.

Memory is one of the earliest and most noticeably affected areas; older adults often experience difficulty in retaining new information while long-term memory generally remains intact. Attention span and processing speed also decline, making multitasking and quick decision-making more challenging. Emotional regulation can become impaired, with heightened susceptibility to anxiety, irritability, or depressive symptoms. Learning ability slows due to reduced neuroplasticity, though experiential and implicit learning often remain preserved. Language functions, such as word retrieval and fluency, may decline slightly, although comprehension is usually maintained. Executive functions responsible for planning, judgment, and problem-solving tend to weaken, contributing to difficulties in adapting to new or complex situations. Psychosocial factors play a crucial role as well. The "empty nest syndrome," a state of loneliness or purposelessness following children's departure from home, often intensifies feelings of isolation and depression. Loss of social roles, bereavement, and physical dependency further impact mental health. Promoting geriatric mental well-being thus requires an integrated approach combining social support, mental stimulation, emotional resilience training, and accessible healthcare interventions.

Geriatric depression

Depression in old age has emerged as a significant global public health challenge. Recent systematic reviews and meta-analyses estimate the global prevalence of geriatric depression at about 31.7% (1). In India, the scenario is especially concerning, with reports of prevalence reaching 55% among older adults. This establishes depression as one of the most common psychiatric disorders in the elderly, affecting nearly one-third of the aging population worldwide.

Despite this high prevalence, geriatric depression remains underdiagnosed, with almost half of all cases going unrecognized. Its detection is complicated by atypical presentations. Rather than overt sadness, elderly individuals often present with memory problems, poor concentration, personality changes, or physical complaints such

as pain, fatigue, gastrointestinal disturbances, and sleep problems. These features may mimic or overlap with dementia, cognitive decline, or other age-related illnesses, making clinical recognition difficult. The consequences of untreated depression in late life are profound. It amplifies functional disabilities, worsens chronic illnesses, delays rehabilitation, and significantly increases the risk of mortality and suicide.

Cultural and personal factors also contribute to under-recognition. Many elderly individuals are reluctant to acknowledge depressive symptoms or seek help due to stigma, fear of being labelled, or the misconception that low mood is a normal part of aging. Together, these factors lead to underreporting and delayed intervention.

Studies on geriatric depression

- Effect of *Aswagandha* and selected yoga module in mild to moderate geriatric depression - a single group pretest post test(2)

Geriatric anxiety

Geriatric anxiety affects approximately 28% of older adults worldwide(3). Generalized anxiety disorder is the most prevalent subtype, affecting around 7.4% of this population(4). Female gender significantly increases risk, with older women nearly three times more likely to experience anxiety disorders(5). Clinical presentation often involves prominent somatic symptoms such as palpitations and gastrointestinal complaints(6). The Geriatric Anxiety Inventory is the most validated screening tool for late-life anxiety(7). Non-pharmacological interventions including cognitive behavioural therapy and structured lifestyle modifications are recommended as first-line treatment.

Studies on geriatric anxiety

- The role of *Sankhpushpi* and clinical yoga techniques in the management of generalized anxiety disorder(8)
- A Clinical study on an ayurveda compound *aswagandha bala,yashtimadhu* in the management of generalized anxiety disorder(9)

Geriatric Dementia

Geriatric Dementia represents a progressive neurodegenerative syndrome characterized by cognitive decline, functional impairment, and behavioural disturbances that significantly compromise the quality of life in the elderly population. In 2025, it's estimated that approximately 8.8 million Indians aged 60 and above live with dementia, which represents about 7.4% to 8.8% of the elderly population(10), now dementia as a critical public health challenge.

Age remains the most significant non-modifiable risk factor for dementia, with prevalence rates doubling approximately every five years after age 65.(11)The pathophysiology varies across dementia subtypes: Alzheimer's disease the most common form features β -amyloid plaques and neurofibrillary tangles; vascular dementia results from cerebrovascular insufficiency; while Lewy body dementia involves abnormal alpha-synuclein protein accumulation causing cognitive fluctuations, visual hallucinations, and parkinsonism.(12) Modifiable risk factors identified through longitudinal studies include hypertension, elevated LDL cholesterol, lower educational attainment, physical inactivity, and sensory impairments(13).The 2024 Lancet Commission identified 14 modifiable risk factors that could potentially prevent or delay nearly half of dementia cases through targeted interventions across the lifespan.(14)

Studies on dementia

- A Longitudinal Observation Study On The Effect Of *Medhya Rasayana* Treatment Package In Dementia(15)
- A Double Blind Randomized Controlled Trial To Assess The Efficacy Of *Aparajitha* Tablet Against *Yashtimadhu* Tablet In Mild Cognitive Impairment(16)
- Efficacy Of *Brahmi Drakshadi Kwatha* In Mild Cognitive Impairment(17)

Geriatric Insomnia

Insomnia represents one of the most prevalent sleep disturbances affecting the geriatric population, with substantial implications for health, quality of life, and mortality. The overall prevalence of insomnia symptoms ranges from 30% to 48% among elderly individuals, while clinically diagnosed insomnia disorder affects 12% to 20% of this demographic.(18).

Normal aging produces characteristic alterations in sleep architecture that predispose older adults to insomnia. Total sleep time declines progressively, accompanied by reduced slow-wave NREM and REM sleep phases critical for cognitive recovery and memory consolidation. Circadian rhythm changes manifest as phase advancement, with earlier evening sleepiness and premature morning awakening. Additionally, melatonin secretion decreases with age, and sleep efficiency the percentage of (19)time spent asleep while in bed continues declining beyond age 90, correlating with increased morbidity. Structural neurodegeneration contributes significantly: ghrelin-expressing neurons in the hypothalamic preoptic region, essential for sleep initiation, decrease proportionally with sleep fragmentation severity, while orexin-expressing neurons promoting wakefulness decline by 40% in aged rodents and 10% in human autopsy studies.(20)

Chronic medical conditions particularly gastroesophageal reflux disease, cardiovascular disease, and chronic pain frequently co-exist with insomnia, creating bidirectional relationships wherein each condition exacerbates the other. The pathophysiology encompasses hyperarousal states characterized by altered locus coeruleus activity during REM sleep, preventing the consolidated noradrenaline time-out necessary for synaptic plasticity in limbic circuits, thereby perpetuating emotional distress and cognitive-emotional arousal cycles.(21)Insomnia significantly increases all-cause mortality risk (hazard ratio 1.39) and non-fatal cardiovascular events (hazard ratio 1.21) after comprehensive adjustment for traditional risk factors and comorbidities, with depression partially mediating this mortality association.(22)

Studies on insomnia

- A Comparative clinical trial to assess efficacy of yashti jeeraka choorna and somalatha choorna in non organic insomnia(23)
- Non Randomized Controlled Trial To Assess The Efficacy Of *Somalatha Choorna* In Non Organic Insomnia Against *Mahapaisaacika Ghritha*(24)
- An Open Clinical Trial In Non Organic Sleep Disorder With *Mahapaisaacika Ghritha* With Special Reference To Psychogenesis Of Sleep And Dreams(25)

Ayurveda Management Of Geriatric Mental Health Disorder

Major depressive disorder, anxiety, cognitive decline, and mixed mood cognitive syndromes are increasingly common in India's ageing population and are often under-recognized and undertreated in conventional care settings. Ayurveda conceptualizes ageing as a stage of progressive *dhātu kṣaya* with predominance of *vāta doṣa* and

decline of *medhā*, *smṛti*, and *bala*, and therefore places strong emphasis on preventive, promotive, and restorative strategies rather than symptomatic control alone.

Dinacaryā and Ritucharya

Ayurvedic daily regimen *dinacaryā* provides the base for geriatric mental health by maintaining *doṣa* balance and circadian rhythm, both crucial for mood stability and cognitive function. Regular waking and sleep times, gentle abhyanga with warm oil, warm baths, light physical activity appropriate to strength, and mindful meals taken at fixed times support autonomic stability, sleep quality, and emotional regulation in older adult. *Ritucharya* further modulates lifestyle and diet to buffer seasonal stress on *vāta* and pitta; for example, in cold, dry seasons emphasis is placed on warm, unctuous food, adequate rest, and reduced sensory overload, all of which reduce anxiety, insomnia, and seasonal mood worsening.

Rasāyana Therapy for Geriatric Mental Health

Rasāyana is central to Ayurvedic geriatric care, aimed at delaying ageing, improving *ojas*, enhancing immunity, and sharpening cognition. In the mental health context, *Medhya Rasāyana* subset of nootropic, cognition-enhancing *rasāyanas* is specifically indicated for age-related memory impairment, depressive symptoms, and cognitive decline. Reviews emphasize that *Medhya Rasāyanas* improve higher mental functions and can be applied in depression, mild cognitive impairment, and early dementia.

Key Rasāyanas

Medhya Rasāyanas (*Mañḍūkāpārnī*(*Centella asiatica*), *Śaṅkhaḥapūṣpī* (*Convolvulus pluricaulis*), *Yaśṭimadhu* (*Glycyrrhiza glabra*), *Guduchi* (*Tinospora cordifolia*)).A scientific review stresses that *Medhya Rasāyanas* act as Ayurvedic nootropics. It is promote for *Dhi*, *Dhṛti*, *Smṛti* and also possesses anti-stress and adaptogenic effect.(26)

- Guduchi (*Tinospora cordifolia*): Guduchyādi Rasāyana in jarājanya smṛtibhramśa shows significant improvement in recall, attention, and overall cognitive performance in elders aged 55–75 years(27). Guduchi supports *vāta* balance, improves cognition, and enhances immune resilience, making it useful in depression with comorbid physical debility.
- Chyavanaprasam:It as trido a-shāmaka, promoting *bala*, *ojas*, *medhā*, *smṛti*, and longevity, and it is indicated in conditions like recurrent respiratory infections, general debility, ageing-related fatigue and poor immunity. The Chyavanaprasa” is very much effective in improving the QOL, functional exercise capacity, and other physiologic activities in terms of Ahara Shakti and Vyāyāma Shakti of the apparently healthy elderly participants due to Vayastapana property of Chyavanaprasa.(28)
- Brahma Rasāyana: It favours anabolic processes over catabolic ones, leading to improved strength, stamina, and recovery in degenerative states(29).The formulation possesses *rochana*, *dīpana* and *pachana* actions, attributed to its guru and *snigdha guṇa* combined with predominantly *madhura rasa*, which enhance appetite, digestion, and assimilation of nutrients. This optimizes *dhātuvāgni*, reduces formation of *āma*, and promotes proper *dhātu-poshana* throughout the body. Through these mechanisms and its documented anti-stress and neuroprotective effects, *Brahma Rasāyana* helps slow early manifestations of ageing, improves memory and cognition, and supports overall resilience against physical and mental fatigue.
- *Āmalakī* (*Embllica officinalis*): Classified as a prime *rasāyana* for longevity, tissue rejuvenation, and *ojas* promotion; its antioxidant and anti-inflammatory actions protect neuronal tissue and support mood stability. *Āmalakī*-based formulations are commonly used in older adults to improve vitality, visual and cognitive functions, enhanced digestive power, immunity and stress tolerance. *Amalaki Rasāyana* may prevent the erosion of telomeres over a period of time in aged individuals to promote healthy ageing.(30)
- *Aśvagandhā* (*Withania somnifera*): A classical *rasāyana* and *balya* drug with proven anti-stress, anxiolytic, and neuroprotective actions; evidence suggests benefits in anxiety, insomnia, and age-related cognitive decline through HPA axis modulation and antioxidant effects. It is especially useful in frail elders with depressive symptoms, fatigue, and sleep disturbance.(31)

Sadvṛtta, Ācāra Rasāyana, and Satvavajaya

Sadvṛtta and *Ācāra Rasāyana* are highlighted as powerful non-pharmacological *rasāyana* measures for mental health in old age, focusing on cultivating *satva* through compassion, truthfulness, moderation, and social connectedness. Maintaining meaningful roles in family, regular social interaction, purposeful activity, and adherence to moral-ethical values build psychological resilience, reduce loneliness, and protect against depressive states in elders.

Satvavajaya Cikitsā : Ayurvedic psychotherapy focuses on *manonigraha* (restraining the mind from unwholesome objects) and on strengthening *dhi* , *dhairya*, and *smṛti* . In geriatric mental health this translates into:

- Cognitive restructuring of hopeless and fearful thoughts
- Encouraging acceptance of life stage, losses, and bodily changes
- Training in replacing harmful emotions (fear, anger, grief) with their opposites (trust, forgiveness, acceptance)

Evidence from Ayurvedic case work on depression shows that restructuring of *chintya*, *vicharya*, *uhyā*, *dheyā*, *sankalpa*, and buddhi leads to durable improvement in mood and function(32).

Yoga and Prāṇāyāma

Yoga and *prāṇāyāma* are integral to geriatric mental health protocols. Evidence-based reviews of integrated *Yoga* and *Rasayan* in elderly with mild cognitive impairment show significant improvement in attention, working memory, and global cognition compared to control interventions.(33) *Yogāsanas* adapted to age and co-morbidities, along with *prāṇāyāma* techniques such as *anuloma-viloma*, *bhṛmāri*, and slow diaphragmatic breathing, improve autonomic balance, reduce anxiety and depressive symptoms, and enhance sleep quality. Regular practice also supports better balance and mobility, indirectly improving confidence , cognitive function and reducing fear of falling a contributor to anxiety in elders.

Pañcakarma and Local Therapies

Where strength permits, carefully selected *pañcakarma* and allied procedures are used in geriatric mental health: gentle *nasya* with *Medhya* drugs, *śirodhāra* or *takradhāra*, *abhyanga*, *vasti* (especially *mātrā vasti*) and mild *virecana* tailored to *vāta*-predominance. Case studies on Alzheimer's disease and dementia using combinations of *śirodhara*, *nasya*, *dhoomapāna*, and internal *Medhya Rasāyana* report improvements in cognition, mood, and social interaction. *pañcakarma* improves *Dhatu,agni,nidra*, along with *Rasāyana aushadi* are specialized in reversing degenerative changes and increase in life span with quality of health.(34)

Proposed Ayurvedic Geriatric Mental Health Protocol

Geriatric mental health challenges often exacerbated by modern stressors, isolation, and dosha imbalances. Ayurveda offers a time-tested, holistic framework to address these through personalized restoration of physical, mental, and spiritual equilibrium. The Proposed Ayurvedic Geriatric Mental Health Protocol is an integrative program tailored for older adults, blending individualized *dinacharya* and *ritucharya* and sleep regulation along with potent *rasayana* and psycho therapies.

- Individualized *dinacarya* and *ritucharya* for balancing biological rhythms, mental health, immunity and metabolic correction.
- *Rasāyana* regimen: *Medhya Rasāyanas*, *Chyavanaprasha*, *Brahmarasayana Amalaki*, *Aśvagandhā*, *Guduchi* and specific *rasāyanas* based on presentation (e.g., *Brahmī* for memory, *Mañḍūkapaṇṇī* for anxiety)
- *Sadvṛtta* and *Ācāra Rasāyana* counseling to restore meaning, social connection, and ethical living
- *Satvavajaya* counseling focusing on cognitive restructuring, emotional regulation, and improving insight and strengthen mental health
- Regular *yoga* and *prāṇāyāma* adapted to age, comorbidities, and functional capacity
- Selected *pañcakarma* and local therapies (*Nasya*, *śirodhāra*, *abhyanga*, *Sirovasti*, *Pichu*) in suitable person based on *bala* to stabilize *doṣa*, nourish the nervous system, and promote deep relaxation
- Socialisation of geriatric population to enhance self esteem, cognitive stimulation, emotional well being by allowing to share experiences and build connections.

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