



**Review Article**

**GERIATRIC DEPRESSION IN INDIA; CAUSES AND SOLUTIONS: AN AYURVEDA PERSPECTIVE**

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**Article info**

**Article History:**

Received: 25-07-2022

Revised: 09-08-2022

Accepted: 21-08-2022

**KEYWORDS:**

Geriatric  
Depression,  
*Kaphaja Unmada*,  
Family systems,  
Joint family.

**ABSTRACT**

Geriatric Depression (GD) prevalence rate is on the rise as is the geriatric population in India. It can be correlated to *Kaphaja Unmada* in Ayurveda based on its causes and symptoms. GD patients have symptoms like *Mandavakchesta* (slowing of speech and actions), *Tushnibhava* (depressed look), *Anaannabhilasha* (disinclination for food). GD has several causative factors like decreased physical agility, cognitive decline, lack of financial liberty, social isolation, long standing diseases and medicines etc. Following the surge of industrialization, urbanization like western countries after 1980s, the family systems and values in India have changed. Nuclear families are on rise and elderlies in families are considered as burden. Contrastingly, earlier elderlies were regarded as source of wisdom and guidance. This study is an attempt to go through all the possible literature offline and online to find out the causes and solutions of GD in India. Findings showed that along with the common causative factors related to the old age in elderlies, ignorance from younger family members is also equally important. GD is a psychosomatic disease, so treatments approach involving the body, mind, family dynamics and values using family psychotherapies and psychoeducation, *Medhya rasayana* and if needed modern psychiatric medication can address all types of GD and related mental health problems in India.

**INTRODUCTION**

Human goes through series of changes at the level of body, mind, role towards the society and regarding economic activities of the family from birth till death. This change brings the freshness in the experience of the life. But sometimes, a person mayn't be able to meet the need of changing situations physically as well as mentally. Geriatric Depression (GD) is one such disorder in which due to the ageing body, related cognitive changes in brain and a feeling of worthlessness due to not having economic role in a family, an elderly person may get into depression.<sup>[1]</sup> So, mental health has always been on the top priority of every civilization. But still due to life situations people often tend to get into imbalanced mental status and according to the intensity, may end up in mental ailments as well.

In India, many studies have reported that the prevalence mental disorders like anxiety, depression etc., is on the rise and more so pronounced after the COVID-19. Geriatric Depression is one such mental disorder which we can't miss to take seriously.<sup>[2]</sup> A recent systematic review estimated that prevalence of Geriatric depression (GD) to be 34.4% in India.<sup>[3]</sup> Geriatric population of India has already reached to 9.7% of the whole population in 2017 and it is projected to augment up to 19% by 2050.<sup>[4]</sup> The increase of geriatric population and the financial burden of managing the geriatric mental disorders goes hand in hand. So, it's better for the government to seriously find out the real causes that has the roots in the economic, political along with socio-cultural system of the nation and hence take the necessary and adequate steps towards mitigating those reasons. This article is thus a sincere effort to search through the relevant articles for the causative factors of GD in India and its probable solutions through an Ayurvedic perspective.

**Geriatric Depression in Ayurveda**

Depression is a sustained state of the low mood characterized by the anhedonia, feelings of worthlessness, hopelessness and helplessness.<sup>[1]</sup>

**Access this article online**

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<https://doi.org/10.47070/ijapr.v10iSuppl1.2472>

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Ayurveda correlates it to *Kaphaja Unmada* based on its causes and symptoms. The extent of the imbalance of mental health is assessed under *Vibhrama* (confusion) of eight domains; *Manas* (mind), *Buddhi* (intellect), *Samjajnana* (consciousness), *Smriti* (memory), *Bhakti* (devotion), *Sheela* (character), *Chesta* (action) and *Achara* (behavior). For instance, person with *Sheela vibhrama* may react angrily on those things which he didn't use to react angrily earlier. *Unmada* is a one such disease condition presenting with *Astavibhrama* (confusion of eight mental domains).<sup>[5]</sup> *Tushnibhava* (depressed look), *Mand vak cheshta* (slowness in activities and speech), *Anaannabhilasha* (disinclination for food) are the cardinal features to diagnose the patient's mental condition as *Kaphaja unmada*.<sup>[6]</sup> *Kaphaja Unmada*/depression in an elderly person is taken as Geriatric Depression. Sushruta mentioned *Jara* (old age) as one of the *Swabhava bala pravritta vyadhi* (naturally culminating after a certain time).<sup>[7]</sup> It is an irreversible change which is only *Yapya* (palliable) but not *Sadhya* (curable). It is characterized by the *Kshaya* (loss) of *Dhatu* (body tissues) and its functions.<sup>[8]</sup> In today's changing socio-cultural and economic scenario when a geriatric person has to tussle with life situations in spite of the decreased

sensory, physical and intellectual abilities then ends up with depression/*Kaphaja Unmada*.

### Etiology of Depression

There are multiple factors linked to the etiology of depression. Biological factors involve the play of hormones and neurotransmitters in nervous system. An upregulation of inflammation might precipitate the development of depression in geriatric person by decreasing the production of monoamines (for example, serotonin), and increasing the production of tryptophan catabolites that are toxic for the brain. So, the infiltration of neurotransmitters like serotonin, which is supposed to be having role in maintaining the mood, may further decrease causing the depressed mood. Some people may have genetic predisposition to the depression. Due to the psychosocial factors like isolation, less care and attachment to the family members, an elderly person might end up in depression.<sup>[9]</sup> Geriatric population has predisposing factors for GD in terms of cognitive decline, learned helplessness behavior, life stressors, chronic diseases and long term medications. (Table No. 1)

**Table 1: Contributing factors of Geriatric Depression**

S.No	Contributing Factors	Mechanism of GD causation
1.	Cognition	Elderly people with more depressive symptoms were reported to use rumination and catastrophizing to a significantly higher extent and positive reappraisal to a significantly lower extent than those with lower depression scores.
2.	Behavior	Older people are found to have 'Learned helplessness'. It is the idea that the cause of depression is the expectation that initiating action in a continually stressful environment is futile.
3.	Life stressors	These stressors include adverse life events and ongoing difficulties; death of a spouse or other loved one; medical illness, especially diseases of the cardiovascular system, and injuries; and disability and functional decline.
4.	Other Chronic Diseases	Specific medical conditions that may be associated with geriatric depression include myocardial infarction, coronary heart disease, cardiac catheterization diabetes, obesity, and high body mass index.
5.	Medications	Substances that have been linked to old-age depression include methyl dopa, benzodiazepines, propranolol, reserpine, steroids, anti-Parkinsonian agents, $\beta$ -blockers etc. <sup>[10]</sup>

### Nidana (causes) of Kaphaja Unmada

Diverse causes can lead to the KU ranging from lifestyle choices to adverse life events. Some factors cause eventually but not KU acutely (*Viprakrautha nidana*). For instances; *Viruddha* (mutually contradictory), *Dushta* (polluted), *Ashuchi* (impure) food and drinks, *Pragharshana* (insult to the gods, preceptors and priests), *Manoabhighata* (mental shock), *Vishama cheshta* (improper movements).<sup>[11]</sup> Conversely, some *Nidana* causes diseases acutely (*Sannikrutha nidana*). Acute aggravation of

predominantly *Vata*, *Pitta*, *Kapha* separately, *Tridosha* altogether, *Visha* (poison) comes under this category.<sup>[12]</sup>

People who are *Bhiru* (fearful), *Upaklishtasatvanam* (afflicted with *Rajas* and *Tamas*), *Kamakrodha-lobha Upahatamanasam* (mind continuously afflicted by passion-anger-greed), or who incurred *Dhana samkshaya* (loss of wealth), *Baandhava samkshaya* (loss of relatives) have propensity to develop *Kaphaja unmada* in due time.<sup>[13]</sup> Taking food

consisting of unwholesome and unclean ingredients, *Viruddha* or touched by unclean hands, neglecting the prescribed dietetic rules regularly can also cause KU.<sup>[14]</sup>

*Vishama cheshta* (improper physical or mental effort), *Pragharshanam devagurudwijanam* (insult to the gods, preceptors and priests), *Atyupaksheena-dehinam* (when the person's body is exceedingly depleted are the behavioral factors that can lead to the causation of *Unmada*.<sup>[15]</sup> *Acharyas* have described the sequential loss of the *Dhatu* and its functions like *Medha* (intelligence), *Shukra* (virility), *Drishti* (vision), etc., along with *Mana*, *Buddhi* (intellect), *Karma* (functioning of the body). The resilience of the body and mind towards the life stressors and adaptability decreases due to the aforementioned reason.<sup>[7-8]</sup>

### Changing Family Systems in India

Ancient India and even majority of India of today also puts impetus on "collectivism" rather than on "individualism". Collectivism promotes interdependence and co-operation, with the family forming the focal point of this social structure. The Indian and Asian families are therefore, far more involved in caring of its sick members than their western counterparts. Indian culture, like many other Asian cultures, emphasized "filial piety." It was considered the duty of a son to respect and care for his parents. And, rather than considering old members of family as burden, Ayurveda suggested "old age is the foundation of all wisdom, virtues." People used to feel reverence for their parents, and expected guidance from them and highly valued their decisions and wisdom.

But now due to the cacophonous expansion of industrialization, urbanization, immigration of young family members to abroad, unexpected changes are happening in family systems in Indian society, which include a shift from joint/extended to nuclear family

and loss of the experience advantage of elderly members in the family, have increased the stress and pressure on such families, leading to an increased vulnerability to emotional problems and disorders. This leads to the setback for the elderly members of the family often leading them to all sorts of mental disorders along with majority of them manifesting GD. But emotional problems are not solely to the elderlies only, younger family members also suffer from indecisiveness, lack of solidarity and cooperation in family and it creates the disharmony in family.<sup>[16]</sup>

Even the large-scale international collaborative studies conducted by WHO reported that persons with schizophrenia did better in India and other developing countries, when compared to their Western counterparts largely due to the increased family support and integration they received in the developing world.<sup>[17]</sup>

### Lifestyle in Ancient India

In Rig Veda, desire for longevity and holistic health is best exemplified in the *Sukta*: "*Pashyem sharadah shatam, Jivet sharadah shatam*" (let me see 100 autumns, let me live 100 autumns). Thus, old age was not thought of any nuisance but as an opportunity to live life joyously and fulfill the aim of life. The life of an individual was being regulated harmoniously according to the stages of life. The ideal life of an individual living for 100 years was demarcated into four stages (Ashrams) - "*Brahmacharya*" (studentship); "*Grihastha*" (householder); "*Vanaprastha*" (forest dweller); "*Sanyas*" (ascetic) depending upon physical, psychological, familial, social and spiritual needs. This concept is still practiced by many individuals in India. This system was meant to maintain the discipline, peace and harmony in the family and society. Each of the stages was intended to prepare for the next. (Table No. 2)

**Table 2: Ashram system and person's duties**

S.No	Ashrama	Duties of a person in a particular Ashram
1.	<i>Brahmacharya</i>	It is proposed to achieve all round developments (including formal, informal education) of the child. This stage was to facilitate the individual to stand on his own feet in later stages of life.
2.	<i>Grihastha</i>	The second stage, <i>Grihastha</i> (householder life) was planned to perform all the duties and debts according to <i>Dharma</i> (right functioning).
3.	<i>Vanaprastha</i>	<i>Vanaprastha</i> was intended to handover the household duties to one's successor, and leave the worldly life, luxuries and enjoyments.
4.	<i>Sanyasa</i>	The fourth <i>Sanyasa</i> (ascetic) <i>Ashram</i> was meant to give up everything and exclusively perform intense " <i>Sadhana</i> " (deep meditation).

Among the four Ashrams, "*Vanaprastha*" and "*Sanyas*" basically relate to old-age lifestyle. The practice/performance related to "*Vanaprastha*" is to devote one's heart and soul for intellectual activities and meditation; at the same time, he has to lead a life

of self-control, friendliness and altruism with intention to give to charity. "*Dharma*" and "*Moksha*" become the main concern of life in the "*Vanaprastha*." In "*Sanyas*" ashram, the *Sanyasi* becomes fit to achieve immortality by not possessing any materialistic thing, by

restraining his senses, by casting out the love and hatred from him, and by living a life of harmlessness to living beings.

Due to aforementioned reasons like modernization and emergence of nuclear families, those cultural systems set from Vedic era like *Ashram* system is gradually eroding. This has led to the unhealthy shifting of responsibilities from one generation to the other. Older generation aren't getting the time and opportunity to shift to later two stages of *Ashram* due to either being alone at home or due to the younger generation not being understanding or cooperative to the need of theirs.

In ancient Indian situations people knew their specific roles to be performed during different stages of life and that left little room for development of psychogenic (exogenous) mental-health problems. The prevalence of exogenous mental disorders like GD was very low. Since, appropriate activities suiting for the different stages of the life were well planned of and joint family used to motivate and support elderlies to adhere to those sorts of noble activities.<sup>18</sup>

### Management of Geriatric Depression

Various treatment procedures can be adopted for treating GD. The general line of treatment involves *Snehana* (oleation), *Swedana* (sudation), *Vamana*, *Virechana*, *Asthapana* (therapeutic-emesis, purgation and enema respectively), etc. with suitable regimens according to the severity of the condition.<sup>19</sup>

*Daivavyapashraya chikitsa* involves voluntarily surrendering to the higher power. It is done with the help of *Mantra*, *Mani* (gems), *Mangala* (auspicious activities), *Bali* (sacrifices), etc. This ultimately causes positive therapeutic effect to the patient. More often used line of management is the use of *Aahara* (food) and *Ausadha* (medicines) to reach the therapeutic endpoint. It is called as *Yuktivyapashraya chikitsa*. The method of pacifying (*Shamana*) with the help of *Medhya rasayanas* (nootropic drugs) and shaman medicines or eliminating (*Shodhana*) the vitiated *Doshas* using *Vamana*, *Virechana* or *Basti* are among the two types of treatment under approaches under it.

Psychological disorders are never treated completely unless the old pattern of *Chittavrittis* (modifications of the mind) are not got rid of. GD patient's despair regarding the purpose of the life and inability to accept the present condition should be addressed with *Naishtiki chikitsa*. The treatment aims to make the person realize the impermanence of everything in world and be free of desire which is the ultimate cause of miseries.<sup>20</sup> Similar approach of restraining the mind from unwholesome thoughts is *Satvavajaya chikitsa*. It distinguishes from the former in that it doesn't directly aim for *Moksha* but the immediate relief from the condition. It can involve the psychotherapeutic counseling of patients using the

Ayurvedic concepts of *Prakriti* (natural somatic and mental constitution), *Dincharya* (daily regimen), *dhyana* (meditation), *Trishna* (desires) etc.<sup>21</sup> *Parasparapratidwandva chikitsa* can also be employed to counteract the emotions like sadness, fear, anxiety caused to GD with the emotions like contentment, love etc., using the social circumstances, games, sports, plays.<sup>22</sup>

### Utility of Rasayana in Jara

*Jara chikitsa* is the rejuvenating therapy, which aids for physical and mental rejuvenation in an elderly person. *Chakrapani* comments that *Swabhavika vyadhi* can only be managed through *Rasayana*. Thus, it can be concluded consumption of *Rasayana* especially rich in *Medhya* property can in one hand act as *Naimittiki Rasayana* to free one from the *Kaphaja Unmada* while at other hand it reverses the signs of the ageing that is aggravated by the *Kaphaja Unmada*.<sup>23-24</sup>

Recent finding has shown that *Medhya rasayanas* helps to increase the attention and concentration. It can counteract the age related cognitive decline in GD patients to bring confidence in them.<sup>25</sup>

### Treatment of GD in Conventional Medicine

For the older depressed patients basically three psychotherapy interventions as well as a second-generation antidepressant (selective-serotonin reuptake inhibitors- SSRIs, serotonin-norepinephrine reuptake inhibitors- SNRIs or norepinephrine-dopamine reuptake inhibitors - NDRIs) can be opted in combination as an evidence-based medicine for the treatment.

Cognitive-behavioral therapy (CBT) aims to change those patterns that reduce pleasure and interfere with a person's ability to function in day-to-day life by targeting current problems and symptoms. These changes can lead to healthier behaviors and improved emotion regulation. It is typically delivered in group format in 7 to 15 weekly sessions. Group-CBT is recommended for the treatment of depression in older adults.

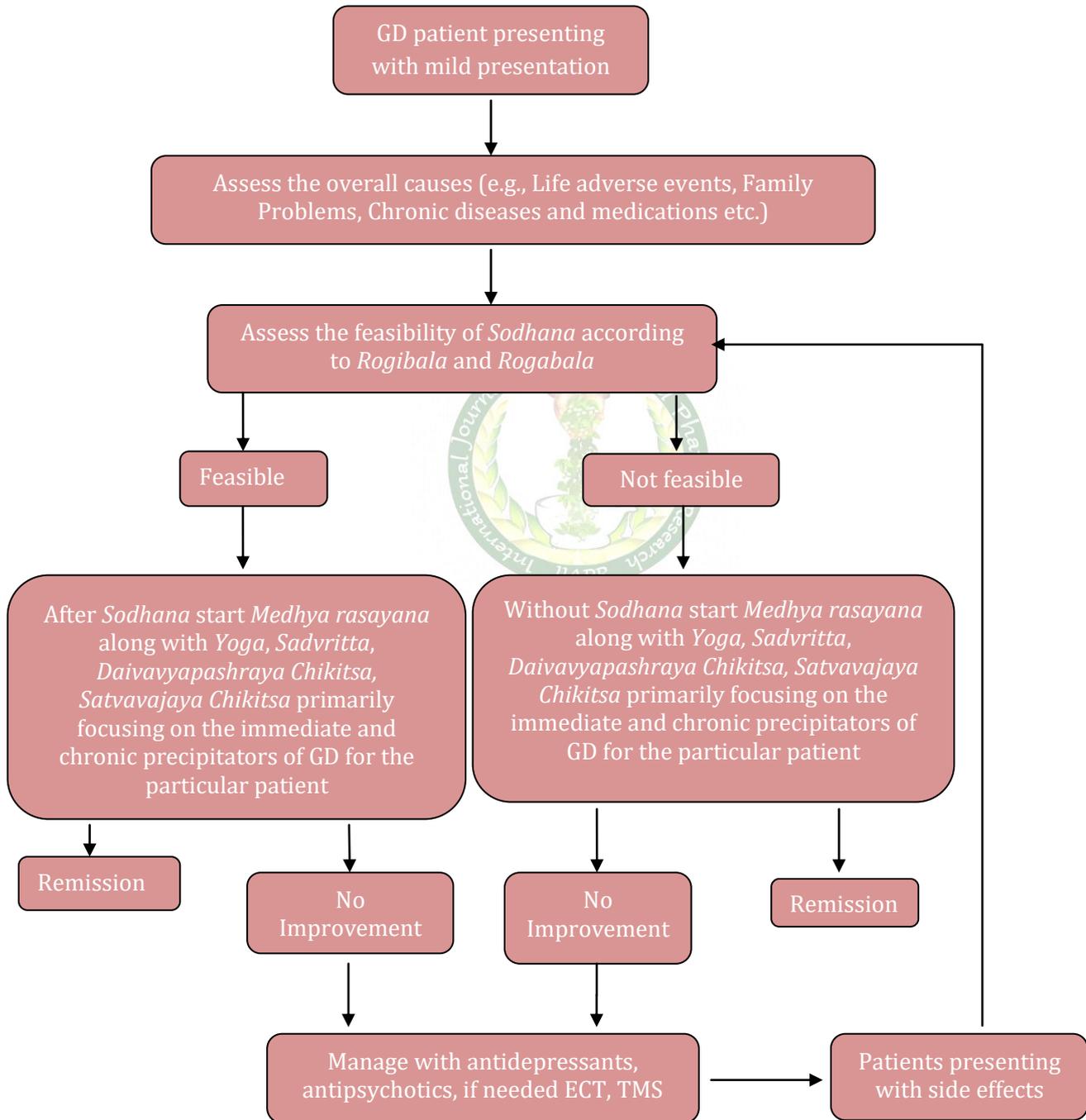
Interpersonal Psychotherapy (IPT) focuses on improving problematic relationships and circumstances that are most closely linked to the current depressive episode. For older adults with depression, treatment can be augmented with a second-generation antidepressant.

Group Life-Review/Reminiscence Therapy helps older persons focus on their life arc, reviewing and reflecting on transitions and challenges, to arrive at a more balanced and accepting perspective of life. On average, older adults receive 4 to 12 weekly sessions of this therapy in a group format. It is also recommended for the treatment of depression in older adults.

Medications like second-generation antidepressants (SSRIs, SNRIs or NDRIs) are recommended for older adults but they are not also side effects free. Around 63% of patient experiences side effects of second-generation antidepressants which include headaches, nausea, drowsiness, constipation, sexual dysfunction etc. Nausea and vomiting are the most common reasons for discontinuation. Drug should be started at a low dose and then slowly increase the dosage until the optimum benefit has been reached.

Available data suggests that in the severe cases of GD, electroconvulsive therapy (ECT) can be utilized for treatment. Data suggests that ECT is well tolerated in patients of old age depression even by subject aged more than 80 years of age. The potential risk and benefit should be weighed on case-to-case basis and where ever warranted the medical treatment should be optimized before ECT.<sup>[26]</sup>

The overall management of any GD and related conditions can be managed in a holistic way as proposed in the flow chart below. (Figure No. 1)



**Figure No. 1- Flow Chart explaining the possible pattern of management of GD in Ayurveda**

## DISCUSSION

As *Unmada* is a *Sharirika-manasika vyadhi*, involvement of both the mental and physical etiological factors are crucial for the causation of the disease. In addition *Aharaja*, *Viharaja*, *Visha* are also equally important etiological factors which one or the other way causes the vitiation of *Sharirika* or *Manasika doshas*. Due to vitiated *Doshas*, when the three faculties of the mind *Dhee-dhriti-smriti* (perception-retention-memory) gets confused, results in *Manasika vikaras* (abnormal emotions) like *Krodha* (anger), *Shoka* (grief), *Bhaya* (fear) etc. *Manovikaras* when longstanding can cause abnormal levels of *Rajas* and *Tamas* again. It culminates KU acutely or on long run.

*Sampurana* (over nourishment) and *Manda cheshta* (sedentary habits) are the two clinically objective etiological factors of KU that can be marked out. It vitiates the *Kapha dosha* along with the *Tamas*. Nowadays, due to urbanization people prefer to eat outside home due to job or for fun. This has caused the problem of frequently consuming the mutually contradictory foods (*Viruddha ahara*) like fish and curd, *Paanipuri* and cold drinks etc. People also consume foods with heavy amounts of pesticides eg, dichlorodiphenyltrichloroethane (DDT), lindane etc., and additives, preservatives eg, butylhydroquinone (TBHQ) chemicals. These can act as a *Gara* or *Dushivisha* (artificial poison) cumulatively after sometime. This can cause detrimental effects in older people due to reduced metabolism.

The changing family systems e.g., emergence of more nuclear families in India have taken the toil over the elderly people. Geriatric people are socially isolated and ignored. In this situation, elderly member of the family may feel utterly confused of the purpose of life and mayn't be able to comprehend their life to have meaning in totality. It's obvious that in such a situation, one will become depressed.

According to the receptivity, education of person and the severity of the KU suitable modality of treatment should be chosen. Chanting of mantras like *Vishnusahasranaama*, *Shivasankalapa sukta* etc., and wearing suitable gems and stones are found to have decreased *Manasa doshas*. These approaches work due to the *Prabhava* (exceptional activity) specific to that gem or *Mantra*.

To normalize *Saririka* and *Manasika dosha*, *Sodhana*, *Samana*, *Rasayana* treatments can be adopted logically. Pacification or elimination of any *Dosha* either *Mansika* or *Sharirika* has an obligatory effect on the corresponding *Doshas*. If *Kapha dosha* is alleviated then heaviness in head and blocking of thoughts due to *Tamas* will also be relieved and vice versa.

The predominant *Dosha* in KU is *Kapha* for which elimination therapy with *Vamana* is ideal.

*Virechana* can also be opted to eliminate associated *Doshas*. *Kaphahara* (*Kapha* alleviating) regimens should be used. Acharyas of Ayurveda resorted to ghee formulations to manage and maintain the remission of *Unmada*. It is lipophilic and can cross the blood brain barrier, thus can be absorbed in brain. It is important to manage *Vataja* symptoms like *Shula*, *Rukshata* etc., to bring overall feeling of quality of life, which ultimately boosts the sense of wellness in older people.

Restraining the mind from unwholesome sense objects is the crux of successful management of every *Manasika vyadhi*. Until, mindful realization of one's maladaptive thoughts and behavior is achieved and corrected remission of *Unmada* can't be ascertained for long. Physician should maintain a healthy doctor patient relationship with a GD patient. Frequent motivation to resume their hobbies and to find confidants for sharing their feelings is worthy move in a therapeutic process.

Vedic cultural heritage of complex family systems which is self sufficient for managing various mental problems and life stresses should be appreciated timely. It may not be necessary to mend/revert back all nuclear families into a joint family but the core values of the system are to be understood. How the three-four generations of people lived under the same roof caring for each other, putting forward the priority of family than their own, symbolizes the ethos of the age long Vedic tradition of families in India. Younger generations should understand to give up their individualistic goals in the favor of the collectivistic goals of the family. Elderly people should be heard and valued. The transition of knowledge, wealth and responsibilities should be made smooth down to the coming generations. Both the generation should deal in love, coordination and common existence.

*Ashram* system of stages of life is a very scientific way of adding meaning and purpose to life. This way elderly person not only gets an opportunity to reflect on their whole life but also to transcend their compulsive behaviors either of love or hatred by doing meditation. Still these systems are practice in India and it should be motivated among families. It should be taken as a public welfare or cultural mental and spiritual health practice. This will boost the contentment among elderly people and in a long run back the holistic development of a nation.

## CONCLUSION

Geriatric Depression is one among the very important disorder which reflects the overall culture, knowledge, health and value system of a nation. It also has its peculiarities being in geriatric population, in terms of causes, symptoms and challenges in

management. But with the aid of holistic treatment system like Ayurveda with its *Rasayanas*, *Shamana ausadhi*, the practice of the rich cultural collectivistic family systems/values and if needed the tertiary care by modern medicines and technologies, all sorts of GD and mental health problems can be tackled systematically. Those wisdom and knowledge rooted in Ayurveda, family systems of India survived till now for ages only because of their sheer practicality. Old age needs to be celebrated and younger generation should learn to see themselves in their older generation. It is bound to bring back the “We” ethos instead of “I” which will certainly decrease the prevalence of GD and other geriatric mental disorders in society.

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**Cite this article as:**

Prashant Banet, Vijayendra Bhat G, Aniruddha Saralaya. Geriatric Depression in India; Causes and Solutions: An Ayurveda Perspective. International Journal of Ayurveda and Pharma Research. 2022;10(Suppl 1):37-44.

<https://doi.org/10.47070/ijapr.v10iSuppl1.2472>

**Source of support: Nil, Conflict of interest: None Declared**

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