# Companionship and Sexual Issues in the Aging Population

Abhishek Ramesh¹, Thomas Gregor Issac¹, Shiva Shanker Reddy Mukku², and Palanimuthu T. Sivakumar¹, and Palanimuthu T. Sivakumar¹, and Palanimuthu T. Sivakumar¹.

#### **ABSTRACT**

Loneliness and social isolation are significant public health crises in older adults. The issues about companionship have many psychosocial and cultural dimensions, which is further compounded by the current COVID-19 pandemic. In modern-day India, there is a significant increase in the number of older adults left to live alone because of sociocultural changes in our society. Companionship in late life is known to promote the quality of life and decrease the mental health morbidity. There is an increasing role of pets as companions to the elderly. Novel technologies such as artificial intelligence in the form of robots are being explored to support the elderly. Sexuality is another complex issue related to older adults that is often ignored. The sexuality and sexual functioning in older adults largely depend on physiological, psychological, and sociocultural factors. The principles of ageism have influenced sexuality in older adults. Sociocultural issues and the aging-related pathophysiological changes can contribute to an increased risk for legal issues related to sexuality in this population. There is a need for more systematic research into the multifaceted concept of companionship and sexuality in the older adult population. This

review article addresses these two distinct subjects separately.

**Keywords:** Elderly, aging, loneliness, companionship, sexuality, sexual issues, legal

## Companionship Issues in the Aging Population

### **Definitions and Concepts**

Loneliness is an unpleasant and distressing phenomenon resulting from inconsistency between individuals' desired level of social relations and the real level of connections.¹ Social isolation is an objective state of having a few social relationships or infrequent social contact with others.².³ Loneliness and social isolation are becoming significant public health issues affecting older adults' mental health globally.

Companionship is defined as "social involvement in shared activities, recreational or nonrecreational, that is pursued for the intrinsic goal of satisfaction or enjoyment." Unlike social support, companionship aims not to solve a problem or provide aid, but to experience pleasure. 4.5

### Prevalence of Older Adults Living Alone in India

The National Family Health Survey data waves from 1992-1993 and 2005-2006 show the change in India's living arrangement structure. The proportion of elders living alone or only with their spouses (thus independently of their children) increased from 9% to 10%.6 According to the recent Longitudinal Ageing Study in India (LASI) wave-1 report, the prevalence of older adults living alone was 5.9%.7 It was also interesting to find that only 14.4% are staying with spouses and children as per the LASI report. As per the United Nations' report in 2017, the proportion of older adults living alone is greater in Europe, Northern America, Australia, and New Zealand as compared to Asian, African, and South American countries.8

### Factors Contributing to Isolation

The traditional Indian society had many protective factors such as joint family systems with children staying together with parents and supporting in their

'Geriatric Clinic and Services, Dept. of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, Karnataka, India. <sup>2</sup>Dept. of Psychiatry, Viswabharathi Medical College and General Hospital, Kurnool, Andhra Pradesh, India.

**HOW TO CITE THIS ARTICLE:** Ramesh A, Issac TG, Mukku SSR and Sivakumar PT. Companionship and Sexual Issues in the Aging Population. *Indian J Psychol Med.* 2021;43(5S):71S-77S.

Address for correspondence: Palanimuthu T. Sivakumar, Geriatric Clinic and Services, Dept. of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, Karnataka 560029, India. E-mail: sivakumar.nimhans@gmail.com

Submitted: 28 June. 2021 Accepted: 25 Aug. 2021 Published Online: 6 Oct. 2021





Copyright © The Author(s) 2021

Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution- NonCommercial 4.0 License (http://www.creativecommons.org/licenses/by-nc/4.0/) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (https://us.sagepub.com/en-us/nam/open-access-at-sage).

ACCESS THIS ARTICLE ONLINE
Website: journals.sagepub.com/home/szj
DOI: 10.1177/02537176211045622

late life. The elderly population living in rural areas had better social networks and certain rituals and customs that promote family unions. All these factors were helping in maintaining adequate social networks and connectedness among older adults in India. However, with modernization, especially in the last two decades, there is a dramatic change in every walk of life. In the modern-day world, the demographic and sociocultural changes such as urbanization, migration, the emergence of nuclear families, empty nests, increased life expectancy, increased widowhood status, generation gap in the digital literacy, and increased institutionalization of older adults might contribute to social isolation and loneliness in older adults in India. In addition, disasters such as the COVID-19 pandemic have pushed millions of older adults in our country to an objective state of social isolation and loneliness.

### Perceived Need for Companionship in Older Adults

In later life, spouses serve as the primary and most proximate companions, followed by friends and neighbors. A study has shown that neighborhood social cohesion did not significantly predict the perceived companionship of individuals residing with others. This might be one of the reasons for the individuals to remarry at old age for a source of companionship.9 The geriatric population, by their loss, changes in their social and family roles, physical and psychological vulnerabilities, and cognitive decline, will need companions in one or the other form for the support. In a qualitative study by Morgan et al., it was found that loneliness manifests in older adults as physical pain, which would explain the difficulties they had in articulating such experiences.10 The neighborhood social cohesion predicts perceived companionship for older adults, particularly for those who are living alone.9

## Effects of Loneliness and Isolation on Physical and Mental Health

Loneliness and isolation have been linked to poor physical health, increased risk for modifiable diseases such as

diabetes mellitus, hypertension, cardiac illnesses, metabolic syndrome, and increased mortality.11 These may be directly related to loneliness or indirectly associated with it because of the various adverse health behaviors such as excessive alcohol intake, smoking, and reduced physical activity, which are more prevalent in the socially isolated elderly population.12 These people are also at risk for depression, anxiety, and cognitive decline. Studies have found that there is a reciprocal relationship between loneliness and depression. Older individuals living alone are at an increased risk for faster cognitive decline.13,14

Companionship and friendship may act as a resource that buffers against the losses associated with old age and helps uplift the person's self-esteem. The formation of new companionship after a loss is dependent on the personality traits of both persons, degree of attraction toward each other, financial and social status of companion, and perceived need for companionship.15 Higher level of negative affect and lower level of companionship and friendship intimacy predict greater substance use. The factors such as intimacy in the relationships and drug abuse in the companions predict the substance use in the general adult population which may be applicable to geriatric population as well.<sup>16</sup> It has been found that mealtime interactions were significantly positively related to older adults' life satisfaction.17

### Promoting Companionship in Late Life

There is a need for sociocultural changes that recognize the value of companionship in late life. Ageism is an important barrier that prevents any change in this attitude toward the companionship of the elderly in their late life.18 Daycare centers for active aging, assisted living communities for senior citizens, peer support interventions, and psychosocial support through the contact of volunteers in person or through telephone are some of the interventions that are being explored for promoting companionship in late life. 19,20 Training of family and professional caregivers needs to be explored to facilitate the improvement in the quality of engagement in order to promote appropriate companionship

in addition to the focus on assisting with basic daily activities.21 Recognition of the importance of such services has encouraged a few home care agencies to include this in the range of services offered to the elderly.<sup>22</sup> The various interventions at individual, community, and society levels such as personal contact, activity and discussion groups, animal contact, skills training (social skills training, digital literacy, etc.), service delivery programs, model of care (spontaneous, resident-driven, purposeful interaction with plants, animals, and children), reminiscence activities, support groups, and public broadcast systems have been found to have a beneficial role in promoting companionship in older adults.23,24 There is a need to ensure optimal safety precautions to prevent any exploitation or abuse of the elderly receiving the services to promote companionship.

### Role of Pets (Companion Animals), Humanoid Robots, and Technology

In a systematic review, it has been found that animal companionship was largely effective in improving the health of older adults, including both physical and mental health as well as the quality of life. With respect to mental health, involvement with a peer companion and a companion animal improved the patient's quality of life and had a positive impact on symptoms of depression, anxiety, cognitive impairment, and behavioral and psychological symptoms of dementia.<sup>25,26</sup> It has been proposed for reducing the adverse health outcomes wrought by social isolation and loneliness by deploying robots to function as social companions and friends to socially isolated elderly people in the pandemic period.27 The other modes include social media, online-based video/audio conversation, voice-controlled intelligent personal assistants, avatar models, and other virtual agents.28-30 These interventions are explored as potential solutions in countries with scarcity of human resources because of the decline in the population of younger adults.

### Paradoxical Aspects of Companionship

Paradoxically, the counterintuitive nature of the relationship between a

patient and a companion complicated by the negative expressed emotions and caregiver burden may lead to an increased likelihood of poor mental health of elderly persons ("care paradox"). Companions of older adults may have sleep disturbances themselves, which leads to the reduced quality of life in them, which further has implications in the future care for the elderly. Too little or too many interactions with a companion can have a negative outcome in anxiety symptoms of the elderly, which was explained by the hypothesis that, "as the cognitive functions in older adults decline, their dependency increases, which causes increased anxiety toward the companion."31

Further research is required regarding safety, mobility issues, confidentiality, and resources concerning new companions. It is important to study multifaceted constructs of companionship and living arrangements and impactful and appropriate use of technology that facilitate companionship and social interactions.9

### Sexual Issues and Sexuality in the Aging Population

The term "sexuality" includes various aspects of a person's sexual functioning such as orientation, gender identity, eroticism, intimacy, pleasure, and reproduction. Sexuality is an essential part of any human being, and the expression of it is a basic human need and right. There has been a significant increase in research in sexuality and sexual problems in the aging population because of various reasons such as increased life expectancy and increased media coverage. <sup>32</sup>

Similar to their younger counterparts, the old age population has normal variations in their sexuality. It is not always possible to decipher the normal agerelated changes in the elderly from those related to illness and psychosocial issues.<sup>33</sup>

## An Overview on Studies in Sexuality in the Aging Population

The studies done across the regions have found the following observations. Studies found that there is no abrupt decline in sexuality in old age; rather, it is gradual. <sup>34</sup> Contrary to a popular belief, it was found that the majority of older

adults are sexually active, and even in extreme old age, sexual activity does not disappear.35 The decline in sexuality in old age could be related to physiological and psychological factors, reduced availability of partners, and preoccupation with the social norms.34 Sexuality is considered a biological essence.36 Sexual activity among old age females heavily depends on societal norms, attitudes, and availability of functionally capable and socially sanctioned male partners.35 Loss of a partner is more common and disturbing in women than men. For men, sleep, mental health, and attitudes toward sex are associated with late-life sexuality. For women, the important factors are having a comparatively younger husband, anxiety levels, mental health, marital satisfaction, experience on sexual intercourse, and attitudes toward sex.37 Homosexual relationships and self-stimulatory practices are more common in men.

There is certain heterogeneity and limitations in the studies mentioned above. These include differences in sampling strategies, assessment tools employed, the inclusion of patients with general medical conditions, and medications interfering with sexual function. Most of the studies in this field are cross-sectional with an inadequate characterization of the sample investigated and drawing conclusions from small, nonrepresentative, and nonrandom samples. Most of the studies predominantly focus on coital activity, equating it to the broader spectrum of sexual activity. Some of the studies also ignored the aging population's motivational, cognitive, affective factors, sexual interests, expectations, beliefs, and satisfaction.32

### Physiological and Medical Aspects of Sexuality in Elderly

#### The Human Sexual Response Cycle

It is mediated by the complex interaction between physiological, psychological, and environmental factors. It consists of the initial phase of desire and interest, followed by four successive phases: arousal, plateau, orgasm, and resolution.<sup>36</sup> The desire phase is characterized by sexual fantasies. It is a subjective phase and is dependent on proper and adequate neuroendocrine function-

ing. The phase of arousal/excitement is mediated by the parasympathetic system and is characterized by sexual pleasure, vaginal lubrication in females, penile tumescence, and erection in males. Testosterone plays a major role in both men and women during the desire and arousal phases. The sympathetic nervous system mediates the orgasm phase. It involves the peaking of sexual pleasure with the release of tension and rhythmic contraction of the perineal muscles and pelvic reproductive organs. It also consists of ejaculatory responses in men. The resolution phase consists of penile detumescence, a subjective sense of wellbeing, and relaxation. After the orgasm, men have a refractory period, which is absent in most women.

#### **Sexual Response and Aging**

# Sexual Response and Effects of Aging in Women<sup>38,39</sup>

Desire phase	<ul> <li>Reduced desire</li> </ul>
Arousal phase	<ul> <li>Increased time required for arousal</li> <li>Slowed and less marked vaginal lubrication</li> <li>Thinning of vaginal mucosa and soreness</li> </ul>
Orgasm phase	Less intense and fewer orgasms     Increased need for stimulation for orgasm     "No" change in the ability to have orgasm
Resolution phase	Rapid and long-lasting resolution

### Sexual Response and Effects of Aging in Men<sup>38,39</sup>

Desire phase	Decreased desire
Arousal phase	Long time is taken for an erection requiring more tactile stimulation     Shorter periods of erections     Less frequent nocturnal erections
Orgasm phase	Less secretion of pre-ejaculatory mucus     Ejaculation less powerful and secretion of less amount of seminal fluid
Resolution phase	Rapid resolution
Refractory period	Longer refractory periods

## Effects of Medical Illness and Medications on Sexuality

Medical illnesses such as diabetes mellitus, hypertension, dyslipidemia, hypogonadism, thyroid, and adrenal diseases, Parkinson's disease,<sup>40</sup> psychiatric disorders such as depression, anxiety, and various surgical procedures could harm the sexual functions in the elderly either directly by their pathogenesis or indirectly by generating unfounded anxiety during sexual intercourse, reducing self-confidence and desire.<sup>32</sup>

Often the geriatric population would be taking multiple medications. It is worth noting that antidepressants, antipsychotics, benzodiazepines, antihypertensives, thiazide diuretics, statins, and anticonvulsants can interfere with sexual functions. The drugs such as L-dopa, lamotrigine, and trazodone may overstimulate sexual functions.<sup>32,39</sup>

### Sexuality in Older Adults: Indian Scenario

India is always viewed as a nation that is conservative in terms of sexuality. Sexuality is seldom spoken about and even less researched. When it comes to sexuality in older adults in India, very few studies have attempted to understand the sexual behaviors in late life. The study on the south Indian geriatric population has found that overall about 27% of the older population was sexually active. About half of the individuals aged 61-65 years were sexually active, which dropped significantly above the age of 75 years. Among those who were sexually active, about half of them had one or more sexual disorders.41 Older adults in India are often seen as individuals who are expected to generally give up their desires and interests and live a solitary life. Because of these assumptions, many older adults seldom express their desires, especially concerning sexual interests. In addition, there are many barriers to the safe expression of sexuality in India among older adults. Some of these include lack of privacy, lack of enough space in the house (often, older adults are expected to give their private room to their children), disapproval from children/grandchildren, viewing sexual

expression as undignified behavior, equating menopause or andropause to the end of sexual life in older adults, and feeling of guilt toward sexual expression. Besides these, other factors but not exclusive to India are frailty, fatigue, physical morbidity, grief, death of a spouse, chronic pain, and erectile dysfunction, which prevent the expression of sexual behaviors in late life. 18,33

### Social Aspects of Sexual Issues in Aging

"Ageism" is defined as "prejudicial attitudes toward the aged, the old age, and the aging process, including attitudes held by the elderly themselves and discriminatory practices against the elderly, and institutional practices and policies which, often without malice, perpetuate stereotypic beliefs about the elderly, reduce their opportunities for a satisfactory life and undermine their dignity." Ageism complicates sexuality and sexual issues in the geriatric population.

### Myths and Attitudes About Sexuality in Old Age<sup>39,43,44</sup>

The myths and misconceptions are prevalent about sexuality across all age groups and genders, which are more so in the old age group, which adversely affect society's views about the sexuality of the geriatric population.<sup>33</sup> These have their origins in transgenerationally ingrained social, political, religious, cultural, and moral values and the portrayal in the popular media. The common myths are as follows:

"Old people are prohibited from having a sexual life, and they are not sexually desirable and capable."

"Sex means only intercourse."

"Menopause is the end of women's sexual life."

"Masturbatory practices are not common and prohibited in the elderly."

#### Attitudes Among Health Professionals Toward Sexuality in the Aging Population

Researchers and policymakers are also not free from age-old stereotypes about aging, leading to flawed methodologies and unrepresentative policy developments. The studies have found that negative attitudes and lack of adequate knowledge and expertise are prevalent even among doctors and nurses.<sup>45</sup> The attitudes of the staff in long-term care (LTC) facilities and nursing homes are also a barrier to promoting sexual wellbeing in older adults. Research has shown that they are both negative or restrictive and positive or permissive.<sup>46</sup>

The factors predictive of negative attitudes are young age, religious beliefs, and negative experiences with older people. In contrast, vocational training, higher socioeconomic status, and positive work experiences with older adults predict positive attitudes among care staff. These will have an impact on the expression of sexuality in inmates of the LTC facilities.<sup>47</sup>

Sexual relationship after the death of a spouse is seen as a taboo in the society.<sup>48</sup> There could be the possibilities of sexual dysfunction in a new relationship after an interim period of abstinence because of the loss of a partner, which is termed as the "widower's syndrome."18 The hesitancy to seek consultation with the professional is majorly because of the lack of awareness, compounded by stigma and ageism prevalent in the society.41 Among the inmates of nursing homes and residential care facilities, there could be even more negative attitudes and reactions from the staff, inmates, and others toward the formation of new intimate relationships by the older adults.

### Sexuality in Aging in Lesbian, Gay, Bisexual, and Transgender (LGBT) Population

Studies on aging and sexuality in the LGBT population are very scarce. It has been found that they would face significant discrimination in both health and social service systems, experience stigma and shame, and hide their sexual orientation for fear of being discriminated. Most of the research works have involved samples from urban, affluent, well-educated, and healthy LGBT people, and it may not represent the general population. Sexual practices in older LGBT people are almost similar to their younger counterparts. Social support and intimate relationships could mitigate the loneliness and stigmatization in them.<sup>49</sup> The current generation of elderly has grown up in an era that held strong opposition to any alternate

forms of sexuality. The sexual preferences that have been hidden because of social stigma may be expressed when there are personality and cognitive changes related to aging.<sup>49</sup>

### Sexuality in Persons with Dementia

The literature regarding sexuality in people with dementia is sparse for various reasons such as discomfort in discussing issues of sexuality with this population, fear of adverse sociocultural implications, and unscientific assumption of the end of sexual life with the onset of dementia.50 Studies have shown that up to 50% of the patients with Alzheimer's disease have one or the other sexual dysfunction, majority of which is erectile dysfunction which is independent of age, cognitive decline, physical illness, or medications.<sup>51</sup> The English Longitudinal Study of Aging, which was conducted on persons with dementia with an age group of 50 to 90 years living in the community, has reported that those with milder dementia severity and better physical activity levels were more sexually active.52 The onset of dementia is also known to alter sexual expression and behaviors in patients, which are often distressing to the patients and partners.53 This may lead to the partner losing the attraction toward the patient and seeking sexual satisfaction elsewhere, leading to guilt. Commonly reported changes in sexual behavior are a decline in interest in sexual activity, possibly because of apathy, inability to carry out sequenced sexual activity, inability to pick up the cues from the partner, and lack of consideration for the responses and satisfaction of the partner. In some disorders such as frontotemporal dementia, patients may show excessive sexual desire and sexual disinhibition.

### Inappropriate Sexual Behaviors (ISB) in Dementia

ISB is defined as "a behavior characterized by a verbal or physical act of an explicit or perceived sexual nature, which is unacceptable within the social context in which it is carried out." Common types of ISB include inappropriate sexual talk, sexual acting out, implied sexual acts, and false sexual allegations. Often, these behaviors create conflicts in public

places and lead to interpersonal issues in their community. These behaviors can potentially increase legal consequences. Management of ISB includes education of the partners and staff, isolation of the patient, removal of cues for ISB, ignoring the behaviors which are not harmful, encouraging alternate behaviors, and distraction methods. In severe cases, there is a requirement of medications such as selective serotonin reuptake inhibitors, antiandrogens, and gonadotropin-releasing hormone analogs.<sup>56</sup>

Persons with dementia cannot exercise their rights often, because of which there is a higher possibility of ignoring their consent for sex, coercion, and sexual abuse. Studies have reported mild cognitive impairment and dementia as risk factors for sexual abuse, which is even more common in LTC residential facilities. A study has shown that the prevalence of sexual abuse in people with dementia is as high as 60%.<sup>57</sup> Sexual abuse in dementia needs to be managed by a multidisciplinary team with appropriate safety measures and legal assistance.<sup>50</sup>

### **Legal and Ethical Issues**

The issues of sexuality in aging populations are not out of the purview of the legal and ethical implications. There is a need for a balance between autonomy, rights, avoiding paternalism, and ensuring the safety of the patient and partner. The fact that someone is older does not automatically imply a lack of or diminished decisional capacity for sexual activity. Indeed, it is presumed that the person is cognitively capable of giving consent for sexual activity independent of age and neuropsychiatric diagnosis. On the other hand, if the decision capacity is in question, one can test the same by formal capacity assessment.

To consent to sexual relations and activities, one must have sufficient knowledge and understanding of the nature of the activity, reasonably fore-seeable consequences, and the capacity to choose without coercion. This is issue-specific (having the knowledge of the nature of activity in general) and situation-specific (whether the person can consent to sexual activity with a particular person at a particular time),50,58

One must also consider the fluctuating capacity to consent in older individuals.

Other legal aspects regarding sexuality in the elderly include complaints of sexual impropriety in LTC institutions and nursing homes. The unique issues that arise while investigating include barriers such as memory recall, delusions, indicators of consent and nonconsent, and general misinterpretations. The court investigation into sexual impropriety is a lengthy and tedious procedure involving multiple court appearances, which could negatively impact the mental health of the elderly. With progressive neurodegenerative diseases, one may have a progressive decline in the capacity of decision making.

Family involvement is another complex aspect with questions such as should families or caregivers be surrogate decision makers in this regard, and to what extent should families be disclosed about the sexual incidents. Importantly, if the patient can consent and does not wish their family to know, it should be respected and kept confidential.

### **Elderly as Sexual Offenders**

The population aging can contribute to the increase in the proportion of elderly individuals among sexual offenders.59 These individuals could be those having an onset of sexually offending behaviors during their younger age or those having the new onset of sexual misbehavior in later life.60 Older age and their social status in the society can play a significant role in perpetuating sexual offense toward the victims who may be involved in a trusted relationship with the offenders. Comorbid psychiatric illnesses may play a role in sexual perpetration. 61 There are reports of the elderly getting involved in child sexual abuse when they are entrusted with the care of the children. Elderly receiving personal care assistance from the caregivers may also misinterpret these interactions and express sexually inappropriate behaviors.

## Companionship and Sexuality During the Pandemic

The COVID-19 pandemic has affected all aspects of health, including the reproductive health of individuals. The partners

would have been separated because of lockdown, isolation, or an unprecedented loss of the partner or loved ones that would have affected the person adversely. This would lead to loneliness, isolation, and grief reactions. Because of the lockdown, the services for the older adults living alone are not readily available, which cause further worsening of loneliness and isolation in this population.<sup>62</sup> The pandemic would affect the different dimensions of sexuality. These include fear of infection because of physical intimacy, worsening of already-existing symptoms of sexual dysfunction because of added anxiety, negative changes in the dynamics of the relationship, propensity for excessive indulgence in pornography and cybersex, etc., which may be seen in the geriatric population as well.63

#### **Evaluation**

### Taking a Sexual History

Most of the curricula focus on pathological aspects of sexual functioning, ignoring the other aspects such as general sexual wellness, education, and healthy sexual functions. These are compounded by the embarrassment from both professionals and patients and ambivalence while collecting the sexual history. <sup>64</sup> The principles of taking a sexual history include the following aspects: <sup>65</sup>

- Understanding the barriers to taking a history such as lack of knowledge, fear of effects caused, using the vocabulary, role of ageism, etc.;
- Ensuring the patient's comfort physically and mentally;
- Assuring total confidentiality;
- Interviewing couples either individually or together;
- Taking a sexual history in the initial periods of history taking;
- Using open-ended and nonthreatening questions;
- Taking a proper psychosocial history;
- Taking a thorough medical and psychiatric history;
- Reviewing the medications and substance use history; and
- Making a formulation and management plan.<sup>28</sup>

Jack Annon developed the PLISSIT model in 1976 to discuss sexual health among all age groups.<sup>66</sup> PLISSIT is the acronym for:

Permission (P): asking permission for history taking, exploring broader aspects of sexual expression.

Limited Information (LI): gather all aspects of history, examination, lab investigations, review of medications, education, and screening regarding sexually transmitted infections, providing information on normal sexual functioning patterns in aging.

Specific Suggestions (SS): identify the dysfunctional phase of the sexual response cycle and look for any medication side effects or effects of general medical conditions.

Intensive Therapy (IT): both pharmacological and psychosocial interventions and refer to a specialist if required.

### Conclusions and Recommendations

In the changing global scenario, it will be worthwhile to look into the various aspects of companionship and its effects on the physical and mental health of the older population. It needs to be explored how the best options of various social group activities, pets, technology, and artificial intelligence could be used as modes for providing companionship. Sexuality and sexual issues in the aging population are yet another multifaceted topic that needs to be further researched in the Indian scenario and needs further attention to biopsychosocial and legal dimensions of it, including the issues in the LGBT population.

#### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

#### **Funding**

The authors received no financial support for the research, authorship, and/or publication of this article.

#### ORCID iDs

Abhishek Ramesh (D) https://orcid.org/oooo-ooo2-9g76-4267
Shiva Shanker Reddy Mukku (D) https://orcid.org/oooo-ooo2-8610-9474
Palanimuthu T. Sivakumar (D) https://orcid.org/oooo-ooo1-9802-2520

#### References

1. Bandari R, Khankeh HR, Shahboulaghi FM, et al. Defining loneliness in older

- adults: Protocol for a systematic review. Syst Rev 2019; 8: 26.
- 2. Wenger GC, Davies R, Shahtahmasebi S, et al. Social isolation and loneliness in old age: Review and model refinement. Ageing Soc 1996; 16: 333–358.
- National Academies of Sciences, Engineering, and Medicine. Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System. Washington, DC: The National Academies Press. 2020. https://doi. org/10.17226/25663.
- Rook KS. Social support versus companionship: Effects on life stress, loneliness, and evaluations by others. J Pers Soc Psychol 1987; 52: 1132–1147.
- Sarason BR, Sarason IG, Pierce G R. (Eds.). Social support: An interactional view. John Wiley & Sons, 1990.
- Sathyanarayana K, Kumar S, James K.
   (2014). Living Arrangements of Elderly in India: Policy and Programmatic Implications. In G. Giridhar, K. Sathyanarayana, S. Kumar, K. James, & M. Alam (Eds.), Population Ageing in India (pp. 74-95). Cambridge: Cambridge University Press. doi:10.1017/CBO9781139683456.005
- Longitudinal Ageing Study in India (LASI). The longitudinal ageing study in India 2017-18: National report. https://lasi.hsph. harvard.edu/publications/longitudinal-ageing-study-india-2017-18-national-report (accessed June 20, 2021).
- 8. Population Division, United Nations. Living arrangements of older persons. https://www.un.org/development/desa/pd/data/living-arrangements-older-persons (accessed July 23, 2021).
- Bromell L and Cagney KA.
   Companionship in the neighborhood context: Older adults' living arrangements and perceptions of social cohesion.
   Res Aging 2014; 36: 228–243.
- 10. Morgan T, Wiles J, Moeke-Maxwell T, et al. "People haven't got that close connection": Meanings of loneliness and social isolation to culturally diverse older people. Aging Ment Health 2020; 24: 1627-1635.
- Henriksen J, Larsen ER, Mattisson C, et al. Loneliness, health and mortality. Epidemiol Psychiatr Sci 2019; 28: 234–239.
- Ong AD, Uchino BN, and Wethington E. Loneliness and health in older adults: A mini-review and synthesis. Gerontology 2016; 62: 443–449.
- Richard A, Rohrmann S, Vandeleur CL, et al. Loneliness is adversely associated with physical and mental health and lifestyle factors: Results from a Swiss national survey. PloS One 2017; 12: e0181442.
- 14. Donovan NJ, Wu Q, Rentz DM, et al. Loneliness, depression and cognitive function in older U.S. adults. Int J Geriatr Psychiatry 2017; 32: 564–573.
- Jerrome D. Good company: The sociological implications of friendship. Sociol Rev 1984; 32: 696–718.
- 16. Shadur J and Hussong A. Friendship intimacy, close friend drug use, and

- self-medication in adolescence. J Soc Pers Relatsh 2014; 31: 997–1018.
- 17. Ye M, Chen L, and Kahana E. Mealtime interactions and life satisfaction among older adults in Shanghai. J Aging Health 2017; 29: 620–639.
- 18. Dhingra I, Desousa A, and Sonavane S. Sexuality in older adults: Clinical and psychosocial dilemmas. J Geriatr Ment Health 2016; 3: 131.
- Rane-Szostak D and Herth KA. A new perspective on loneliness in later life. Issues Ment Health Nurs 1995; 16: 583–592.
- 20. Lunt C, Dowrick C, and Lloyd-Williams M. The role of day care in supporting older people living with long-term conditions. Curr Opin Support Palliat Care 2018; 12: 510–515.
- 21. Chung PYF, Ellis-Hill C, and Coleman P. Supporting activity engagement by family carers at home: Maintenance of agency and personhood in dementia. Int J Qual Stud Health Well-Being 2017; 12: 1267316.
- 22. Zeltzer BB and Kohn R. Mental health services for homebound elders from home health nursing agencies and home care agencies. Psychiatr Serv 2006; 57: 567–569.
- O'Rourke HM, Collins L, and Sidani S. Interventions to address social connectedness and loneliness for older adults: A scoping review. BMC Geriatr 2018; 18: 214.
- 24. Fakoya OA, McCorry NK, and Donnelly M. Loneliness and social isolation interventions for older adults: A scoping review of reviews. BMC Public Health 2020; 20: 129.
- 25. Hughes MJ, Verreynne M-L, Harpur P, et al. Companion animals and health in older populations: A systematic review. Clin Gerontol 2020; 43: 365–377.
- 26. Conwell Y, Van Orden KA, Stone DM, et al. Peer Companionship for Mental Health of Older Adults in Primary Care: A Pragmatic, Nonblinded, Parallel-Group, Randomized Controlled Trial. Am J Geriatr Psychiatry Off J Am Assoc Geriatr Psychiatry 2021; 29: 748–757.
- 27. Jecker NS. You've got a friend in me: sociable robots for older adults in an age of global pandemics [published online ahead of print, 2020 Jul 16]. Ethics Inf Technol. 2020;1–9.
- 28. Chipps J, Jarvis MA, and Ramlall S. The effectiveness of e-Interventions on reducing social isolation in older persons: A systematic review of systematic reviews. J Telemed Telecare 2017; 23: 817–827.
- 29. O'Brien K, Liggett A, Ramirez-Zohfeld V, et al. Voice-controlled intelligent personal assistants to support aging in place. J Am Geriatr Soc 2020; 68: 176–179.
- 30. Shaked N. Avatars and virtual agents: Relationship interfaces for the elderly. Healthc Technol Lett 2017; 4(3): 83–87.
- 31. Mitchell JA, Cadet T, Burke S, et al. The paradoxical impact of companionship on the mental health of older African American men. J Gerontol B Psychol Sci Soc Sci 2018; 73: 230–239.

- Dening T and Thomas A. Oxford textbook of old age psychiatry. Oxford University Press, 2013.
- 33. Kalra G, Subramanyam A, and Pinto C. Sexuality: Desire, activity and intimacy in the elderly. Indian J Psychiatry 2011; 53: 300–306.
- 34. Kinsey AC, Pomeroy WR, and Martin CE. Sexual behavior in the human male. 1948. Am J Public Health 2003; 93: 894–898.
- 35. George LK and Weiler SJ. Sexuality in middle and late life. The effects of age, cohort, and gender. Arch Gen Psychiatry 1981; 38: 919–923.
- 36. Masters WH, Johnson VE, and Reproductive Biology Research Foundation (U.S.). Human sexual response. Little, Brown, 1966.
- 37. Beckman N, Waern M, Gustafson D, et al. Secular trends in self reported sexual activity and satisfaction in Swedish 70 year olds: Cross sectional survey of four populations, 1971-2001. BMJ 2008; 337: a279.
- Rheaume C and Mitty E. Sexuality and intimacy in older adults. Geriatr Nurs 2008; 29: 342–349.
- 39. Sathyanarayana Rao TS, Tandon A, Manohar S, et al. Clinical practice guidelines for management of sexual disorders in elderly. Indian J Psychiatry 2018; 60: S397–S409.
- 40. Basson R and Schultz WW. Sexual sequelae of general medical disorders. Lancet 2007; 369: 409-424.
- 41. Sathyanarayana Rao TS, Ismail S, Darshan MS, et al. Sexual disorders among elderly: An epidemiological study in south Indian rural population. Indian J Psychiatry 2015; 57: 236–241.
- 42. Butler RN. Ageism: A foreword. J Soc Issues 1980; 36: 8–11.
- Bouman WP. Chapter 1: Keeping sex alive in later years. In: Tomlinson J, Rees M, Mander T (eds) Sexual health and the menopause. RSM Press, 2005; p 1–7.
- 44. Rao TSS. Forbidden fruit in the golden years: Elderly sexuality. J Geriatr Ment Health 2014; 1: 8–13.
- 45. Webb C. A study of nurses' knowledge and attitudes about sexuality in health care. Int J Nurs Stud 1988; 25: 235-244.
- 46. Hodson DS and Skeen P. Sexuality and aging: The hammerlock of myths. J Appl Gerontol 1994; 13: 219–235.
- 47. Eddy DM. Before and after attitudes toward aging in a BSN program. J Gerontol Nurs 1986; 12: 30–34.
- 48. Trudel G, Turgeon L, Piché L. Marital and sexual aspects of old age., Sexual and Relationship Therapy, 2000; 15:4, 381–406.
- 49. Fredriksen-Goldsen KI, Kim H-J, Muraco A, et al. Chronically ill midlife and older lesbians, gay men, and bisexuals and their informal caregivers: The impact of the social context. Sex Res Soc Policy 2009; 6: 52–64.

- 50. D'cruz M, Andrade C, and Rao TSS. The Expression of intimacy and sexuality in persons with dementia. J Psychosexual Health 2020; 2: 215–223.
- 51. Zeiss AM, Davies HD, Wood M, et al. The incidence and correlates of erectile problems in patients with Alzheimer's disease. Arch Sex Behav 1990; 19: 325–331.
- 52. Wright H and Jenks RA. Sex on the brain! Associations between sexual activity and cognitive function in older age. Age Ageing 2016; 45: 313–317.
- 53. Simonelli C, Tripodi F, Rossi R, et al. The influence of caregiver burden on sexual intimacy and marital satisfaction in couples with an Alzheimer spouse. Int J Clin Pract 2008; 62: 47–52.
- 54. Johnson C, Knight C, and Alderman N. Challenges associated with the definition and assessment of inappropriate sexual behaviour amongst individuals with an acquired neurological impairment. Brain Inj 2006; 20: 687–693.
- 55. Black B, Muralee S, and Tampi RR. Inappropriate sexual behaviors in dementia. J Geriatr Psychiatry Neurol 2005; 18: 155–162.
- 56. Tucker I. Management of inappropriate sexual behaviors in dementia: A literature review. Int Psychogeriatr 2010; 22: 683–692.
- 57. Burgess A and Phillips S. Sexual abuse, trauma and dementia in the elderly: A retrospective study of 284 cases. Vict Offenders 2006; 1: 193–204.
- 58. Joy M and Weiss KJ. Consent for intimacy among persons with neurocognitive impairment. J Am Acad Psychiatry Law 2018; 46: 286–294.
- 59. Booth BD. Elderly sexual offenders. Curr Psychiatry Rep 2016; 18: 34.
- 60. Thornton D. Age and sexual recidivism: A variable connection. Sex Abuse: J Res Treat 2006; 18: 123–135.
- 61. Chua J, Cheung G, Friedman S, et al. What are the characteristics of first time older sexual offenders? Int Psychogeriatr 2017; 30: 1–16.
- 62. Wu B. Social isolation and loneliness among older adults in the context of COVID-19: A global challenge. Glob Health Res Policy 2020; 5: 27.
- 63. Banerjee D,Mukhopadhyay S, Tandon A, Rao TSS. (May 24th 2021). Uncertainty, Sex and Sexuality during the Pandemic: Impact on Psychosocial Resilience [Online First], IntechOpen, DOI: 10.5772/intechopen.98231. Available from: https://www.intechopen.com/ online-first/76816
- 64. Galletly C, Lechuga J, Layde JB, et al. Sexual health curricula in U.S. medical schools: Current educational objectives. Acad Psychiatry 2010; 34: 333–338.
- 65. Kingsberg SA. Taking a sexual history. Obstet Gynecol Clin North Am 2006; 33: 535-547.
- 66. Annon JS. The PLISSIT model: A proposed conceptual scheme for the behavioral treatment of sexual problems. J Sex Educ Ther 1976; 2: 1–15.