ORIGINAL ARTICLE

Exploring the Triple Burden: Financial Dependency, Social Isolation, and Loneliness among residents of a South Indian Rural Community

Srishthi Ramasamy Duraisamy[1], Vijayakarthikeyan Madhu[2], Elakkiya Selvaraju[3], Sangeetha Balamurugan[4]

[1]CRMI, Vinayaka Mission's Kirupananda Variyar Medical College and Hospitals, Vinayaka Missions Research Foundation Deemed to be University (VMRF DU), Salem, Tamilnadu

[2,3,4]Department of Community Medicine, Vinayaka Mission's Kirupananda Variyar Medical College and Hospitals, Vinayaka Missions Research Foundation Deemed to be University (VMRF DU), Salem, Tamilnadu

CORRESPONDING AUTHOR

Dr M. Vijayakarthikeyan, Associate Professor, Department of Community Medicine, Vinayaka Mission's Kirupananda Variyar Medical College and Hospitals, Vinayaka Missions Research Foundation Deemed to be University (VMRF DU), Salem, Tamilnadu

Email: vijay.doc09@gmail.com

CITATION

Srishthi RD, Vijayakarthikeyan M, Elakkiya S, Sangeetha S. Exploring the Triple Burden: Financial Dependency, Social Isolation, and Loneliness among residents of a South Indian Rural Community. Indian J Comm Health. 2026;38(1):41-45.

https://doi.org/10.47203/IJCH.2026.v38i01.009

ARTICLE CYCLE

Received: 22/10/2025; Accepted: 11/02/2026; Published: 28/02/2026

ABSTRACT

Background: India's aging population is rapidly growing with loneliness affecting approximately 48% of older adults in rural India increasing the risk of depression and early mortality. Social isolation and financial stress diminish quality of life and increase dependency, **Aims & Objectives:** To estimate the prevalence of financial stress, social isolation and loneliness among residents of rural South Indian community. To ascertain the association between socio-demographic factors with these psychosocial outcomes. **Methodology:** This community-based cross-sectional analytical study was carried out among rural residents (≥ 50 years). We employed WHO SAGE for financial dependence, Lubben Social Network Scale-6 for social isolation, and University of California Los Angeles Loneliness Scale. SPSS Version 23 was used for data analysis. **Results:** In this study, 53.2% had loneliness, 63.2% had social isolation and 56.4% were financially dependent on the family members. Older age (≥ 60 years) was significantly associated with financial dependance, social isolation and loneliness. **Conclusion:** Financial dependency, social isolation and Loneliness were significant burdens for older individuals. An integrated, multisectoral approach is essential to address these interconnected issues, focusing on community support, financial literacy and robust social security programs.

KEYWORDS

Aged, Mental health, Social support, Financial stress

INTRODUCTION

Among older adults, social isolation, loneliness, and financial dependence are emerging as significant public health challenges that directly impact physical and mental health outcomes.(1) Loneliness is a subjective sense of suffering brought on by perceived social detachment, whereas social isolation is defined as an objective absence of social interaction are distinct but interrelated constructs.(2) Globally, older adults in rural areas are vulnerable to these conditions due to reduced social networks, geographic remoteness, lower income levels, and limited access to services.(3,4)

Social isolation and loneliness have been linked to higher risks of cardiovascular disease, depression, cognitive decline, low functional status and even all-cause mortality.(5-6) Similarly, financial dependence exacerbates psychological distress and contributes to decreased quality of life.(7) This triad of social isolation, loneliness and financial stress is particularly pronounced in rural and under-resourced regions.(8)

In India, the proportion of elderly persons is steadily increasing, with rural areas housing nearly 70% of elderly.(9) Yet, there is a dearth of research that explore how sociodemographic characteristics interact to result in social isolation, loneliness and financial stress. Most existing literature fails to account for their interdependence, especially in the cultural and structural context of rural South India.(10,11)

Aims and Objectives

1. To estimate the prevalence of financial stress, social isolation and loneliness among residents of rural South Indian community.
2. To ascertain the association between socio-demographic factors with these psychosocial outcomes

MATERIAL & METHODS

Study design: Cross-sectional analytical research conducted in a community.

Study setting: The study was carried out in a few rural communities in the southern Indian state of Tamil Nadu, namely in Attayampatti, Salem.

Study population: Permanent residents of the research area who are 50 years of age or older.

Study duration: The research was carried out over a six-month period. (January to July 2025) following approval from the Institutional Ethics Committee.

Sample Size: Based on the previous study by Chokkanadan S et al reporting prevalence of loneliness in older rural Indian adults as approximately 48% and using $N = Z^2PQ / L^2$ formula, (P = 48, Q = 52 , Z = 1.96, L = 5). Adding 20% for non-response 460 was final sample size. But 500 samples were included to increase the power.

Sampling Method: Multi-stage random sampling was used. Villages were selected by lottery method. Within each village, households were chosen using systematic random sampling method and one eligible participant per household was interviewed.

Inclusion Criteria: Older adults aged ≥50 years who were permanent residents (≥ 3year) of the area and consented were included.

Exclusion Criteria: Individuals with diagnosed psychiatric illness, cognitive impairment or communication difficulty were excluded from this study.

Data Collection: A semi-structured, validated questionnaire comprising sociodemographic parameters, UCLA Loneliness Scale Short version, Lubben Social Network Scale - 6 (LSNS-6) for social isolation and WHO SAGE 2 item version for financial dependence was employed.

Operational Definitions

Loneliness: UCLA 3 item scale was used and final score ≥6 considered as indicative of loneliness.(13)

Social Isolation: LSNS - Lubben Social Network Scale 6 item scale was used and final score <12 considered socially isolated.(14)

Financial Stress: WHO SAGE 2 item version was used. It consists of 2 self-reported questions and the final score of 0 is considered as financially independent and 1 or 2 as financially dependent.(15)

Data Analysis: MS Excel data were compiled and analyzed on SPSS Version 23 Software. The categorical variables were presented in frequencies and percentages and continuous variables as mean with standard deviation. Significant association was detected by chi-square test and binary logistic regression. A p-value of <0.05 was considered statistically significant.

RESULTS

About 59.6% belonged to 50 – 59 years and age and majority 56.5% were males. Around 28% belonged to upper lower class, 36.2% belonged to lower middle socioeconomic status (Table 1).

In this study, 53.2% had loneliness, 63.2% had social isolation and 56.4% were financially dependent on the family members (Figure 1).

Variables significantly associated with loneliness in this study include older age (p value: < 0.0001, OR: 2.39), occupation (p value: 0.010, OR: 1.59), lower socioeconomic status (p value: < 0.0001, OR: 2.44) and alcohol use (p value: 0.027, OR: 1.55) as displayed in Table 2. Whereas social isolation was significantly associated with older age (p value: 0.032, OR: 1.50) and education (p value: 0.0002, OR: 2.08) (Table 3). Financial dependance was significantly associated with older adults (p value: < 0.0001, OR: 2.22), female gender (p value: < 0.0001, OR: 2.83) lower socioeconomic status (p value: 0.0002, OR: 2.96) and tobacco use (p value: 0.005, OR: 1.84) in this study (Table 4).

Table 1: Sociodemographic characteristics of the study participants (N – 500)

Socio-Demographic characteristic	Frequency	Percentage (%)
Age		
50-59 years	298	59.6
60 years and above	202	40.4
Sex		
Male	283	56.5
Female	217	43.3
Education		
Illiterates	111	22.2
Primary School	107	21.4
Middle School	131	27.2
High School & above	151	30.2
Occupation		
Unemployed	72	14.4
Unskilled	75	15
Semiskilled	135	27
Skilled and above	209	41.8
Socio economic status		
Lower Class	93	18.6
Upper lower Class	140	28
Lower middle Class	181	36.2
Upper middle Class	36	7.2
Upper Class	50	10
Type of family		
Joint Family	64	12.8
Nuclear	420	84
Three generation family	16	3.2

Figure 1: Prevalence of loneliness, social isolation and financial dependance in older adults in a rural setting (N - 500)

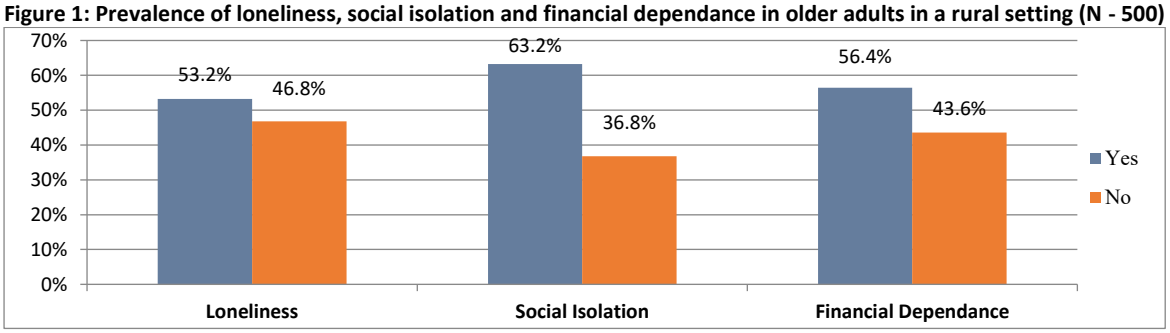

Table 2: Association between selected variables and Loneliness

Variables	Loneliness		p Value	Odds Ratio (95% CI)
	Yes (266)	No (234)		
Age				
≥ 60 years	133	69	< 0.0001*	2.39 (1.65 – 3.46)
< 60 years	133	165		
Sex				
Female	114	103	0.794	0.95 (0.66 – 1.35)
Male	152	131		
Education				
Below high school	180	169	0.268	0.80 (0.54 – 1.18)
High school and above	86	65		
Occupation				
< Skilled	169	122	0.010*	1.59 (1.11 – 2.28)
Skilled and above	97	112		
Socio economic status				
Lower and upper lower	173	101	< 0.0001*	2.44 (1.70 – 3.51)
Middle class and above	93	133		
Alcohol use				
Yes	90	58	0.027*	1.55 (1.05 – 2.29)
No	176	176		
Tobacco use				
Yes	58	62	0.220	0.77 (0.51 – 1.16)
No	208	172		

**p value < 0.05 is statistically significant*

Table 3: Association between selected variables and Social isolation

Variables	Social isolation		p Value	Odds Ratio (95% CI)
	Yes (316)	**No (184)**		
Age				
≥ 60 years	139	63	0.032*	1.50 (1.03 – 2.19)
< 60 years	177	121		
Sex				
Female	132	84	0.415	0.85 (0.59 – 1.23)
Male	183	100		
Education				
Below high school	239	110	0.0002*	2.08 (1.41 – 3.08)
High school and above	77	74		
Occupation				
< Skilled	183	108	0.863	0.96 (0.66 – 1.40)
Skilled and above	133	76		
Socio economic status				
Lower and upper lower	167	107	0.250	0.80 (0.55 – 1.16)
Middle class and above	149	77		
Alcohol use				
Yes	91	57	0.606	0.90 (0.60 – 1.33)
No	225	127		
Tobacco use				
Yes	74	46	0.689	0.91 (0.60 – 1.40)
No	242	138		

**p value < 0.05 is statistically significant*

Table 4: Association between selected variables and financial dependance

Variables	Financial Dependence		p Value	Odds Ratio (95% CI)
	Yes (282)	No (218)		
Age				
≥ 60 years	137	65	< 0.0001*	2.22 (1.53 – 3.22)
< 60 years	145	153		
Sex				
Female	152	64	< 0.0001*	2.83 (1.95 – 4.12)
Male	129	154		
Education				
Below high school	195	154	0.718	0.93 (0.63 – 1.37)
High school and above	87	64		
Occupation				
< Skilled	160	131	0.450	0.87 (0.60 – 1.24)
Skilled and above	122	87		
Socio economic status				
Lower and upper lower	175	99	0.0002*	1.96 (1.37 – 2.81)
Middle class and above	107	119		
Alcohol use				
Yes	80	68	0.959	0.98 (0.67 – 1.45)
No	202	170		
Tobacco use				
Yes	81	39	0.005*	1.84 (1.20 – 2.84)
No	201	179		

**p value < 0.05 is statistically significant*

DISCUSSION

In this study, mean age was 57±6.2 years and majority 56.5% were males. Nearly 22.2% were illiterates and only 30.2% had high school and above education. Similarly, Male preponderance was seen in studies by Eslami R et al (16), Costenobel A et al (17), Wang G et al (18) and Fadzil FM. et al (19). Whereas on the contrary female preponderance was seen in studies by Rohr S et al (20), Kotian DB et al (21), Mishra SK et al (22), Susheela P et al (23), Grover S et al (24), Srivastava P et al (25) and Anjum et al (26). Whereas mean age was 45.2±17.3 years, 67.67±10.31 years, 86.5±3 years and 69.23±7.12 years respectively in studies by Rohr S et al (20), Coyle CE et al (1), Costenobel A et al (17) and Wang G et al (18).

In this study among the study participants, 53.2% had loneliness. Similar to our study loneliness was noted in 40%, 50.8%, 55.4% and 66.57% respectively in studies by Damor N et al (27), Das A et al (28), Grover S et al (24) and Mishra SK et al (22). Whereas our study results were not consistent with loneliness prevalence in studies by Kotwal AA et al (5), Susheela P et al (23), Srivastava P et al (25), Costenobel A et al (17), Wang G et al (18), Kim J et al (29) and Dahlberg L et al (30) Nearly 63.2% had social isolation in this study. Similar findings was noted in studies by Eslami R et al (16) (59.3%) and Das A et al (28) (48.7%). On the contrary social isolation prevalence was 12.3%, 19%, 19.7% and 34.3% respectively in studies by Rohr S et al (20), Kotwal AA et al (5), Kumar M et al (31) and Kotian DB et al (21).

Around 56.4% were financially dependent on the family members in this study. Similar finding were noted in study by Anjum et al (26) in which 50.8% were financially dependent. Ronanki S et al (32) study recorded a financial dependence prevalence of 70%. In Huang R et al (15) study noted that 81.3% of the study participants were financially dependent and 75% were financially dependent in Rent PD et al (33) study. Whereas 23.7%, 27.6% and 48.7% had low, moderate and high financial dependence in study by Fadzil FM. et al (19).

Variables significantly associated with loneliness in this study include older age, occupation, lower socioeconomic status and alcohol use. Similar to our study age was associated in studies by Wang G et al (18), Srivastava P et al (25), Damor N et al (27) and Anil R et al (34). Income was determinant of loneliness in Susheela P et al (23), Wang G et al (18), Das A et al (28) and Anil R et al (34) studies. Gender which was significantly associated in studies by Kotwal AA et al (5), Mishra SK et al (22), Damor N et al (27) and Das A et al (28) was found to be insignificant in our study.

In our study social isolation was significantly associated with older age and education. Similarly, age was significant in studies by Rohr S et al (20), Kotian DB et al (21), Das A et al (28) and Kumar M et al (31). Education was significantly associated with social isolation in study by Eslami R et al (16). Even though low socioeconomic was significant in studies by Rohr S et al (20), Das A et al (28) and Kumar M et al (31) it was found to be not significantly associated with social isolation in this study.

Financial dependance was significantly associated with older adults female gender, lower socioeconomic status and tobacco use in this study, Our, findings were comparable to findings of Ronanki S et al (32) study in which financial dependance was significantly associated with age, gender, education and socioeconomic status. In Naronha V et al (35) study financial toxicity was associated with history of tobacco chewing, illiteracy, monthly family income, lack of health insurance and cognitive impairment.

Conclusion

This study provides compelling evidence that over half of the participants reported social isolation and loneliness, with advanced age and lower socioeconomic status being significant contributing factors. More than half of the participants expressed serious concerns about financial reliance, especially older women and those from poorer socioeconomic backgrounds. The results demonstrate how interconnected these issues are pointing to a complicated network of demographic and socioeconomic weaknesses that disproportionately impact this group. In order to alleviate these burdens, a Integrated strategy that takes lifestyle factors into account is necessary.

In these rural environments, multisectoral initiatives are essential for reducing the triple burden among older persons. Public health programs should focus on developing community-based assistance in order to combat social isolation and loneliness through networks like social clubs or senior centers.

Recommendation

Routine screening for loneliness, social isolation and financial dependency should become part of primary healthcare services provided specifically as geriatric care programmes. Strengthening community based supportive systems like elderly self-help groups, day-care centers and social clubs for improving social connectedness. Enhancing financial security by increasing awareness, easing access and utilization of pension schemes for elderly persons and social support enhancements. Encouraging multisectoral coordination across health, social welfare and local governance in response to the interconnected triple burden.

Limitation of the Study

The cross-sectional design limits causal inference and dependence on self-reported tools may introduce recall and social desirability bias. Also the study was conducted in a specific rural setting, limiting generalizability to other populations.

Relevance of the Study

Address the intersection of financial fragility, social isolation and loneliness among rural older adults. Also inter relationship between socio-demographic factors and psychosocial outcomes in a rural South Indian are documented. Contributes to scarce literature on “triple burden” and the need for integrated interventions.

Authors Contribution

SRD: Conceptualization, data collection, data entry, drafting of manuscript. VM: Study design, supervision, data analysis, critical revision of manuscript. ES: Data collection, literature review, manuscript drafting. SB: Data analysis support, interpretation of results, manuscript editing.

Financial Support and Sponsorship

Nil

Conflict of Interest

None declared

Declaration of Generative AI and AI Assisted Technologies in the Writing Process

The authors disclose that the conceptualisation, design, data collection, analysis, interpretation and final conclusions presented in this manuscript are entirely the work of human authors and no generative AI tools were used

References

1. Coyle CE, Dugan E. Social isolation, loneliness and health among older adults. Journal of aging and health. 2012 Dec;24(8):1346-63.
2. Shankar A, McMunn A, Demakakos P, Hamer M, Steptoe A. Social isolation and loneliness: Prospective associations with functional status in older adults. Health psychology. 2017 Feb;36(2):179.
3. Donovan NJ, Blazer D. Social isolation and loneliness in older adults: review and commentary of a national academies report. The American journal of geriatric psychiatry. 2020 Dec 1;28(12):1233-44.

4. Courtin E, Knapp M. Social isolation, loneliness and health in old age: a scoping review. Health & social care in the community. 2017 May;25(3):799-812..
5. Kotwal AA, Cenzer I, Waite LJ, Hawkley L, Smith AK. The Epidemiology of Social Isolation and Loneliness Among Older Adults During the Last Years of Life (W215D). Journal of Pain and Symptom Management. 2021 Mar 1;61(3):643.
6. Holt-Lunstad J, Smith TB, Baker M, Harris T, Stephenson D. Loneliness and social isolation as risk factors for mortality: a meta-analytic review. Perspectives on psychological science. 2015 Mar;10(2):227-37.
7. Pickering J, Wister AV, O'Dea E, Chaudhury H. Social isolation and loneliness among older adults living in rural areas during the COVID-19 pandemic: a scoping review. BMC geriatrics. 2023 Aug 23;23(1):511.
8. Paquet C, Whitehead J, Shah R, Adams AM, Dooley D, Spreng RN, Aunio AL, Dubé L. Social prescription interventions addressing social isolation and loneliness in older adults: Meta-review integrating on-the-ground resources. Journal of medical Internet research. 2023 May 17;25:e40213.
9. Census of India 2011. Ministry of Home Affairs, Government of India.
10. India H. State of elderly in India. New Delhi 2014, available at: https://www. helpageindia.org/images/pdf/state-elderly-india-2014.pdf (Accessed 18 June 2025).
11. Victor CR et al. Loneliness in later life: cross-sectional findings from the English Longitudinal Study of Ageing (ELSA). J Gerontol B Psychol Sci Soc Sci. 2005;60(2):S118–S124.
12. Chokkanathan S. Prevalence of and risk factors for loneliness in rural older adults. Australasian Journal on Ageing. 2020 Dec;39(4):e545-51.
13. Lubben J, Blozik E, Gillmann G, Iliffe S, von Renteln Kruse W, Beck JC, Stuck AE. Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. The Gerontologist. 2006 Aug 1;46(4):503-13.
14. Hughes ME, Waite LJ, Hawkley LC, Cacioppo JT. A short scale for measuring loneliness in large surveys: Results from two population-based studies. Research on aging. 2004 Nov;26(6):655-72.
15. Huang R, Ghose B, Tang S. Effect of financial stress on self-rereported health and quality of life among older adults in five developing countries: a cross sectional analysis of WHO-SAGE survey. BMC geriatrics. 2020 Dec;20:1-2.
16. Eslami R, Shahrokhi Z, Daneshfar M, Ghorbani Noghabi R, Hosseinpour B, Sadeghmoghadam L, Moradi M. Study of social isolation and related factors in the elderly of gonabad city in 2022. Journal of Gerontology. 2023 May 10;8(1):41-50.
17. Costenoble A, De Baets S, Knoop V, Debain A, Bautmans I, Verté D, Gorus E, De Vriendt P, Gerontopole Brussels Study Group. The impact of covid-19 lockdown on the quality of life, meaningful activities, and frailty in community-dwelling octogenarians: a study in Belgium. Aging & Mental Health. 2023 Aug 3;27(8):1567-75.
18. Wang G, Zhang X, Wang K, Li Y, Shen Q, Ge X, Hang W. Loneliness among the rural older people in Anhui, China: prevalence and associated factors. International journal of geriatric psychiatry. 2011 Nov;26(11):1162-8.
19. Fadzil FM. Financial Dependency of Older Person on Their Adult Children: A Case of Older Persons in Rural Kedah Malaysia.
20. Röhr S, Wittmann F, Engel C, Enzenbach C, Witte AV, Villringer A, Löffler M, Riedel-Heller SG. Social factors and the prevalence of social isolation in a population-based adult cohort. Social psychiatry and psychiatric epidemiology. 2022 Oct;57(10):1959-68.
21. Kotian DB, Mathews M, Parsekar SS, Nair S, Binu VS, Subba SH. Factors associated with social isolation among the older people in India. Journal of geriatric psychiatry and neurology. 2018 Sep;31(5):271-8.
22. Mishra SK, Jena SK. Assessment and evaluation of depression and loneliness among people living with HIV in selected places of coastal Andhra Pradesh. Indian Journal of Public Health Research & Development. 2013;4(3):261-6. https://doi.org/10.5958/j.0976-5506.4.3.121
23. Susheela P, Valsaraj BP. Depression, Perceived Loneliness and Partial Functional Impairment among Older Adults. Journal of Clinical & Diagnostic Research. 2018 Oct 1;12(10). https://doi.org/10.7860/JCDR/2018/34086.12096
24. Grover S, Verma M, Singh T, Dahiya N, Nehra R. Loneliness and its correlates amongst elderly attending non-communicable disease rural clinic attached to a tertiary care centre of North India. Asian J. Psychiatr. 2019 Jun 1;43:189-96. https://doi.org/10.1016/j.ajp.2019.06.001
25. Srivastava P, Srivastava M. Prevalence and correlates of loneliness in the later life—insights from Longitudinal Ageing Study in India (LASI) Wave-1. Indian Journal of Psychiatry. 2023 Sep 1;65(9):914-21.
26. Anjum V, Swarupa MS, Shaikh FM, Chandrasekhar A. A study of association between functional dependency, financial dependency and social participation among elderly citizens. Indian Journal of Public Health Research & Development. 2018;9(2):313-9.
27. Damor N, Yogesh M, Makwana N, Trivedi N, Kagathara J. Prevalence and predictors of loneliness and its association with health-seeking behaviors among the elderly population, Gujarat, A community-based cross-sectional study. Journal of Family Medicine and Primary Care. 2024 Jul 1;13(7):2719-23.
28. Das A, Bhattacharyya K, Mondal S, Bhattacharya S. Predictors of social isolation and loneliness among elderly residing in a slum in eastern India. Ind J Public Health Res Dev. 2023;26(14):7-12.
29. Kim J, Angel JL, Rote SM. A longitudinal study of cognitive and instrumental activities of daily living disablement among the oldest Mexican Americans. Journal of aging and health. 2022 Mar;34(2):196-205.
30. Dahlberg L, Andersson L, Lennartsson C. Long-term predictors of loneliness in old age: results of a 20-year national study. Aging & mental health. 2018 Feb 1;22(2):190-6.
31. Kumar M, Ruikar M, Surya VL. Prevalence and determinants of social isolation among elderly in an urban slum of Raipur city—A community based cross-sectional study. International Journal of Geriatric Psychiatry. 2022 Sep;37(9).
32. Ronanki S, Samanta T, Rajpal S. Assessing Economic Dependency Among Indian Elderly: Evidence from Nationally Representative Household Survey, 2018. InHandbook of Aging, Health and Public Policy: Perspectives from Asia 2024 Sep 27 (pp. 1-15). Singapore: Springer Nature Singapore.
33. Rent PD, Kumar S, Dmello MK, Purushotham J. Psychosocial status and economic dependence for healthcare and nonhealthcare among elderly population in rural coastal Karnataka. Journal of Mid-life Health. 2017 Oct 1;8(4):174-8.
34. Anil R, Prasad K, Puttaswamy M. The prevalence of loneliness and its determinants among geriatric population in Bengaluru City, Karnataka, India. International Journal of Community Medicine and Public Health. 2016 Nov;3(11):3246-51. https://doi.org/10.18203/2394-6040.ijcmph20163944
35. Noronha V, Tongaonkar A, Pillai A, Rao AR, Kumar A, Sehgal A, Basu R, Ramaswamy A, Dhekale R, Daptardar A, Sonkusare L. Prevalence and impact of financial toxicity in older patients with cancer: a prospective observational study in India. Supportive Care in Cancer. 2025 May;33(5):1-5.

