Section: Miscellaneous

Original Research Article

PREVALENCE OF DEPRESSION AMONG GERIATRIC PATIENTS AND ITS ASSOCIATION WITH FAMILY RELATIONSHIPS IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Background: Informed consent ensures ethical participation in geriatric research. Depression is common among older adults and is influenced by family support, social interactions, and lifestyle. This study aimed to assess its prevalence and association with family relationships, grandparenting, and daily life satisfaction.

Materials and Methods: An analytical cross-sectional study was conducted over three months in 2024 at a tertiary hospital in Virudhunagar, Tamil Nadu, enrolling 220 participants aged ≥65 years. Socio-demographic, family, lifestyle, and comorbidity data were collected using a semi-structured questionnaire, and depression was assessed using the 15-item Geriatric Depression Scale. Associations were analysed using chi-square tests and odds ratios ($p < 0.05$).

Results: Among patients, 120(54.8%) most were female and 176(80.0%) were aged 65–75 years. Depression was present in 131(59.8%): mild 73(33.2%), moderate 41(18.6%), and severe 17(7.7%). Most lived with a spouse 134(61.0%), children 138(62.7%), and grandchildren 125(56.8%), with 156(70.9%) caring for grandchildren. Depression was higher in those not living with children 59/81 (72.8%; OR=2.45, p=0.003) or grandchildren 64/94 (68.1%; OR=1.83, p=0.03), lacking daily social interactions 66/89 (74.2%; OR=2.86, p<0.0004), experiencing forgetfulness 86/131 (65.6%; OR=9.30, p<0.0001), or reporting low life satisfaction 63/69 (91.3%; OR=12.6, p<0.0001). Daily life satisfaction was higher among those aged 65–75 [81/129 (62.8%)], not depressed 82/88(93.2%), and with frequent social interactions 97/150(64.7%).

Conclusion: Depression affects over half of older adults and is strongly linked to limited family support, social isolation, forgetfulness, and low life satisfaction. Strengthening family and social engagement may reduce depression and enhance well-being in geriatrics.

Keywords: Depression, Elderly health, Family support, Geriatrics, Life satisfaction, Social interaction.

INTRODUCTION

Ageing is often mistaken for a disease because of the human desire for immortality and eternal youth; however, this view is incorrect. Ageing is a natural physiological process that occurs due to the gradual accumulation of molecular and cellular damage over time. It is an inevitable outcome of the body's normal metabolic activities.[1] The World Health Organization defines geriatrics as individuals aged 65 years and older. Among them, those between 65 and 75 years will be in the transition period from working life to retirement; they are called the young–old. In Individuals between 75 to 85 years of age, the functional losses begin to occur, they are advanced old ages. In very advanced old ages, chronologically above 85 years, they need special care and support.[2]

The prevalence of common medical problems among the geriatrics is mainly cardiovascular (33.3%), neurological (32-80 per 1000), endocrine (38%), locomotor (25%), visual (24.5%), psychiatric (1-25%) and other disorders in descending order of prevalence.[3-8] There is a 2 to 4 percentage increase prevalence of depression among people with these diseases, thereby contributing to a significantly increased health burden.[9] In a systematic review and meta-analysis, the overall global prevalence of depression in the geriatric population was found to be 35.1% (95%CI: 30.2–40.4%).[10]

The National Mental Health Survey of India was conducted on a nationally representative sample of 34802 individuals, sampled from 12 states of India. The survey revealed that common mental disorders (CMDs), including depression, anxiety disorders, and substance use disorders, are a huge burden, affecting nearly 10% of the population. The weighted prevalence of depression, high rates were reported among the elderly (3.5%).[11] In a cross-sectional study done, the prevalence of depression among older adults in Tamil Nadu was estimated to be 67.5% (95% CI-0.66–0.68).[12]

Family relationships are deeply connected to the emotional and mental well-being of older adults, providing them with comfort, a sense of belonging, and emotional security. Supportive family environments, strong social ties, and frequent interpersonal interactions are associated with lower levels of depressive symptoms, whereas social isolation, neglect, and strained familial bonds exacerbate psychological distress.[13] Understanding the association between family dynamics and depression among older adults is essential for developing targeted interventions and promoting healthy ageing in the geriatric population. This study also aimed to associate the prevalence of depression with family relationships and grandparenting status, and daily life satisfaction.

MATERIALS AND METHODS

This analytical cross-sectional study was conducted over three months in 2024 at a tertiary care hospital in Virudhunagar, Tamil Nadu. The study was approved by the Institutional Ethics Committee, and written informed consent was obtained from all patients.

Inclusion Criteria

Participants aged ≥ 65 years who were inpatients or those visiting the hospital for monthly prescription refills were included in the study.

Exclusion Criteria

Inpatients admitted during the study period owing to ill health and individuals unwilling to provide consent were excluded.

Sampling and sample size

A total of 266 individuals were recruited. After excluding those who did not consent and those who met the exclusion criteria, 220 participants were finally enrolled. The sample size was calculated based on a previous study that reported a prevalence of depression among older adults of 67.5%, with a 5% marginal error and 10% relative precision.12 A simple random sampling method was employed using computer-generated numbers.

Methods

A semi-structured socio-demographic questionnaire was used to collect data on the participants' lifestyles, with particular emphasis on family support and care. Depression was assessed using the short version of the 15-item Geriatric Depression Scale. Although an online form was used for data entry, the participants were interviewed directly to avoid technical difficulties.

Statistical Analysis

SPSS Software v23 was used for statistical analysis. Descriptive statistics were used to estimate the prevalence and demographic characteristics. The chi-square test was used to identify associations between variables, and odds ratios were calculated to determine the strength of significant associations with depression. Statistical significance was set at $p < 0.05$.

RESULTS

Among the patients, 120 (54.8%) were female and 99 (45.2%) were male. Most were aged 65–75 years 176 (80%), followed by 75–85 years 34 (16%) and above 85 years 9 (4%). Depression was present in 131 (59.8%), with 73 (33.4%) mild, 41 (18.7%) moderate, and 17 (7.8%) severe (Table 1).

Table 1: Sociodemographic and depression status

Variable	Category	N (%)
Gender	Female	120 (54.8%)
	Male	99 (45.2%)
Age group (years)	65–75	176 (80%)
	75–85	34 (16%)
	>85	9 (4%)
Depression status	Not depressed	88 (40.2%)
	Depressed	131 (59.8%)
Degree of depression	Mild	73 (33.4%)
	Moderate	41 (18.7%)
	Severe	17 (7.8%)

Footnotes: Data are presented as frequencies and percentages (%). Depression severity was categorised as mild, moderate, or severe.

A total of 134 (61.2%) participants lived with their spouses, 138 (63%) with son/daughter, and 125 (57.1%) with their grandchildren. Taking care of grandchildren was reported by 156 (71.2%). A total of 133 (60.7%) patients received treatment for comorbidities. Regular exercise was practised by 123 (56.2%), while 130 (59.4%) reported daily interactions with more people. Screen time was noted in 90 (41.1%) patients. Forgetfulness was present in 101 (46.1%) patients, and 150 (68.5%) expressed satisfaction with their daily lives (Table 2).

Table 2: Distribution of family, lifestyle, health, and psychosocial factors

Variable	Category	
	Yes	No
Living with a spouse	134 (61.2%)	85 (38.8%)
Living with son/daughter	138 (63%)	81 (37%)
Living with grandchildren	125 (57.1%)	94 (42.9%)
Taking care of grandchildren	156 (71.2%)	63 (28.8%)
Treatment for comorbidities	133 (60.7%)	86 (39.3%)
Doing regular exercise	123 (56.2%)	96 (43.8%)
More people interaction/day	130 (59.4%)	89 (40.6%)
Screen time/day	90 (41.1%)	129 (58.9%)
Feeling of forgetfulness	101 (46.1%)	118 (53.9%)
Daily life satisfaction	150 (68.5%)	69 (31.5%)

Footnotes: Data are presented as frequencies and percentages (%). Lifestyle and psychosocial factors included living arrangements, exercise, social interactions, screen time, forgetfulness, and daily satisfaction.

Patients who did not live with their son or daughter had a higher chance of depression than those who did (45% vs. 25%, OR = 2.45, 95% CI: 1.35–4.44, p = 0.003). Similarly, patients not living with grandchildren showed a higher prevalence of depression (48.9% vs. 34.1%, OR = 1.83, 95% CI: 1.02–3.26, p = 0.03). Those with less daily social interaction were more likely to be depressed (50.4% vs. 26.1%, OR = 2.86, 95% CI: 1.59–5.15, p < 0.0004). A significant association was also observed between forgetfulness and depression, with patients reporting forgetfulness having a much higher risk (65.6% vs. 17%, OR = 9.30, 95% CI: 4.79–18.03, p < 0.001). Furthermore, patients without daily life satisfaction had a substantially increased chance of depression compared with those satisfied with their daily life (48.1% vs. 6.8%, OR = 12.6, 95% CI: 5.10–31.4, p < 0.001) (Table 3).

Table 3: Risk factors associated with depression

Risk factor	Category	Depression status		p-value	Odds Ratio (95% CI)
		Not depressed	Depressed		
Living with son/daughter	No	22 (25%)	59 (45%)	0.003	2.45 (1.35 – 4.44)
	Yes	66 (75%)	72 (55%)		
Living with grandchildren	No	30 (34.1%)	64 (48.9%)	0.03	1.83 (1.02 – 3.26)
	Yes	58 (65.9%)	67 (51.1%)		
More People interaction/day	No	23 (26.1%)	66 (50.4%)	<0.0004	2.86 (1.59 – 5.15)
	Yes	65 (73.9%)	65 (49.6%)		
Feeling of forgetfulness	No	73 (83%)	45 (34.4%)	<0.001	9.30 (4.79 – 18.03)
	Yes	15 (17%)	86 (65.6%)		
Daily life satisfaction	No	6 (6.8%)	63 (48.1%)	<0.001	12.6 (5.10 – 31.4)
	Yes	82 (93.2%)	68 (51.9%)		

Footnotes: Data are presented as frequencies and percentages (%). P-values were calculated using the chi-square test. OR: Odds Ratio; CI: Confidence Interval. The risk factors include living arrangements, social interactions, forgetfulness, and daily life satisfaction.

Patients aged 65–75 years reported a higher rate of daily life satisfaction than older patients (54% vs. 32.7% in 75–85 years and 13.3% in >85 years, p = 0.033). Patients who were not depressed had significantly higher satisfaction than those with depression (54.7% vs. 8.7%, p < 0.001). Similarly, patients with more daily social interactions showed higher satisfaction levels than those with fewer interactions (64.7% vs. 47.8%, p = 0.018) (Table 4).

Table 4: Association of risk factors with daily life satisfaction

Risk factor	Category	Yes	No	p-value
Age group (years)	65–75	81 (54%)	48 (69.6%)	0.033
	75–85	49 (32.7%)	11 (15.9%)	
	>85	20 (13.3%)	10 (14.5%)	
Depression status	Not Depressed	82 (54.7%)	6 (8.7%)	<0.001
	Depressed	68 (45.3%)	63 (91.3%)	
More people interaction/day	Yes	97 (64.7%)	33 (47.8%)	0.018
	No	53 (35.3%)	36 (52.2%)	

Footnotes: Data are presented as frequencies and percentages (%). P-values were calculated using the chi-square test. The risk factors included age, depression status, and daily social interactions.

DISCUSSION

In our study, most participants were female and aged 65–75 years. Depression was common among the participants, ranging from mild to severe. Similarly, Dhakal et al. included 330 elderly participants (53.9% female), mostly aged 60–70 years (43.3%). Depression was present in 65.8%, with mild in 22.1% and moderate in 40%.[14] Likewise, Damagum et al. studied 392 participants, reporting higher depression in females (80.7%) than males (19.3%, p=0.019), and associations with widowhood (30.7%), polygamous marriage (63.6%), and lower occupational class (p=0.022).[15] Align with our findings, Nshimyumuremyi et al. included 107 participants (81.3% female, mean age 72.32 ± 8.79), with depression classified as normal 35.5%, mild 52.3%, and moderate 12.2%.[16]

Similarly, Park et al. analysed 8188 participants, noting age-related differences in education, residence, living arrangements, health, and independence (p<0.001); life satisfaction was higher in the 65–74 age group (3.6 ± 0.69) than in the 75+ group (3.4 ± 0.71, p<0.001).17 Overall, the findings from our study and previous research indicate that depression is prevalent among older adults, particularly women aged 65–75 years, with severity ranging from mild to moderate and influenced by social and demographic factors such as widowhood, marital status, and occupational class.

In our study, most participants lived with their families and were involved in caring for their grandchildren. Over half engaged in regular exercise and daily social interactions, while many reported forgetfulness. The majority expressed satisfaction with their daily lives. Likewise, Nshimyumuremyi et al. reported that family support and Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q) were significant psychosocial factors, with mean scores of 34.24 and 41.15, respectively, and family support negatively correlated with geriatric depression (r = −0.438 to −0.105).16 Similarly, Gandhi et al. found behavioural and lifestyle factors associated with depression, including insufficient sleep, tobacco use (16.24% severe among snuff users), smoking (11.84% severe), lack of physical activity (28.71% severe in non-exercisers), and alcohol use (11.25% severe).[18]

Aligning with our findings, Pandit et al. observed the highest rates of severe depression among those living alone (73.7%) and with a spouse only (66.7%), while living with a spouse and children reduced rates; social problems such as loneliness (24.2%) and family conflicts were also noted.[19] Likewise, Li et al. reported 12.9% living alone, with poor family relationships and low social support linked to higher depression; 30.5% had ≥3 chronic diseases, 83.7% required long-term medication, and life satisfaction significantly influenced depression prevalence (p < 0.05).[20] This shows that geriatric depression is greatly influenced by family support, social interaction, and lifestyle choices, with living alone, social isolation, poor habits, and multiple comorbidities contributing to higher prevalence and severity.

In our study, depression was more common among participants who did not live with children or grandchildren, those with limited social interactions, those experiencing forgetfulness, and those lacking satisfaction in their daily lives. Similarly, Damagum et al. identified female gender (OR 1.401, p=0.014), widowhood (OR 4.533, p=0.030), and obesity (OR 5.644, p=0.001) as significant predictors of depression.15 Similarly, Nshimyumuremyi et al. found males had lower depression scores (45.9 ± 7.27) than females (51.5 ± 8.15), and family support significantly reduced symptoms; education and marital status were not significant. Regression analysis showed that family support (B = −0.100, p = 0.029) and quality of life (B = −0.195, p = 0.035) were significant predictors.[16]

Gandhi et al. reported strong associations between depression and comorbid medical conditions, including hypertension, arthritis, vision impairment, cardiac illness, asthma, and chronic constipation (all p<0.001), as well as recent life events such as family conflicts, illness, unemployment, and financial problems.[18] Similarly, Pandit et al. reported that economic dependency and marital status had a significant association with depression (p<0.05). Higher rates were observed among fully dependent, widowed, or unmarried individuals. Additionally, social factors such as loneliness, destitution, and property-related issues further increased depressive symptoms.[19] Findings from our study and other research suggest that geriatric depression often arises due to limited family involvement, social isolation, female gender, widowhood, economic dependence, coexisting medical conditions, and exposure to stressful life situations.

In our study, daily life satisfaction was higher among younger participants, those without depression, and those with more daily social interaction. Similarly, Li et al. reported that higher self-evaluated life satisfaction was associated with lower depression prevalence (p < 0.05).20 Align with our findings, Park et al. found that life satisfaction scores were higher in the 65–74 age group than in those 75+ (3.6 ± 0.69 vs. 3.4 ± 0.71, p<0.001), and social activity frequency, meetings, and phone contacts with children and friends significantly predicted life satisfaction (Adjusted R^2 = 0.246–0.256, p< 0.001).[17] Puvill et al. reported a life satisfaction median of 8/10, which was strongly influenced by depressive symptoms and loneliness. Functional status had a smaller but significant effect (−0.3 points, p<0.05). Institutionalisation slightly reduced life satisfaction (-1.0 points, p<0.001).[21] Therefore,

older adults with more life satisfaction tend to be younger, free from depression, and socially active, where regular engagement with family and friends plays a vital role.

Limitations

As this was a cross-sectional, single-centre study, causal inferences and generalisability are limited. Reliance on self-reported measures may have introduced recall or reporting bias.

CONCLUSION

Depression is prevalent among older adults, with mild forms being the most common. It was strongly associated with a lack of family support, reduced social interaction, forgetfulness, and low life satisfaction. In contrast, those living with children or grandchildren, maintaining regular social contact, and experiencing satisfaction in their daily lives were less affected. Further research should focus on family-based and community interventions to reduce depression and improve the well-being of older adults.

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