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Sociodemographic and psychological factors associated with depression among nursing home elders

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A B S T R A C T

Introduction: Depression in the elderly is shaped by sociodemographic and psychological factors. Depression generally affects older adults and is associated with a poor life, with sociodemographic and psychological factors such as social support and loneliness playing a role in the onset of depression. However, the relationship between these factors and depression in the elderly is still rarely explored.

Purpose: This study aims to explore the relationship between psychological and sociodemographic factors on the level of depression in the elderly living in nursing homes, with a focus on social support, level of loneliness, and cognitive impairment.

Methods: This study used a descriptive cross-sectional design and involved 72 older adults living in four East Java, Indonesia nursing homes. Data were collected through questionnaires using the Multidimensional Scale of Perceived Social Support (MSPSS), UCLA Loneliness Scale, Mini-Mental State Examination (MMSE), and Beck Depression Inventory-II (BDI-II), which were translated into Bahasa Indonesia. Multiple logistic regression was used to understand the relationship between sociodemographic and psychological factors and the level of depression in the elderly.

Results: Marital status (AOR 0.177, p = 0.030) and social support (AOR 0.950, p = 0.040) are significantly associated with depression in the elderly.

Conclusion: Marital status and level of social support have the potential to cause depression in the elderly living in nursing homes.

INTRODUCTION

Depression in the elderly is a common mental disorder characterized by persistent sadness, pessimism, sleep disturbances, low self-esteem, slow thinking, and reduced responsiveness.[1-3] It often goes undetected as age-related physical conditions may mask symptoms. Beyond aging, depression is influenced by psychosocial and health factors, including chronic illness, loneliness, lack of social support, cognitive decline, and personality traits. Studies indicate that limited physical activity, poor sleep, an unhealthy diet, and low social support increase the risk.[3] Elderly individuals living alone or in nursing homes are particularly vulnerable due to reduced social interaction and emotional support.[5,6]

Depression is the fourth most common mental illness worldwide, significantly affecting quality of life.[7] Its prevalence exceeds 7.5% in women and 5.5% in men, with global estimates ranging from 3% to 30%.[8,9] Research has explored its risk factors, health impacts, and the influence of social conditions on emotional well-being. Strong social support reduces depression risk, yet some nursing home residents still experience emotional satisfaction through positive interactions with peers.[10,11]

This study examines the combined effects of sociodemographic and psychological factors on depression in nursing home residents, providing a broader perspective on their impact on well-being.[12,13] Unlike previous studies that assess these factors separately, this research integrates them to offer insights for more effective interventions. It aims to bridge this gap by exploring the relationship between sociodemographic and psychological factors and depression in older people. Additionally, it provides a more detailed analysis of depression levels.

METHOD

Study Design

This study used a cross-sectional design.[14]

Setting and Respondents

The study was conducted in four East Java, Indonesia nur-

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sing homes from September to October 2024. The study population is all elderly people living in four nursing homes, with a sample of 72 elderly people. The inclusion criteria include seniors ≥60 years old who have lived in nursing homes for more than three months and who are cooperative and willing to be respondents. Older adults with severe dementia or critical conditions are excluded. The sampling technique used is consecutive sampling.[15]

The Variable, Instruments, and Measurement

This study examines sociodemographic and psychological factors as independent variables and depression levels as the dependent variable. Sociodemographic factors include age, gender, marital status, education, and length of stay in nursing homes, while psychological factors cover social support, loneliness, and cognitive impairment. Social support is measured using the MSPSS (reliability: 0.85; Indonesian adaptation: 0.77).[16] Loneliness is assessed with the UCLA Loneliness Scale-3 (validity: CFI = 0.942, TLI = 0.917, RMSEA = 0.062; Cronbach's alpha: 0.96).[17] Cognitive function is evaluated using the MMSE (validity: 0.776; reliability: 0.827).[18] Depression levels are measured using the Indonesian BDI-II, with a validity of 0.89 and an item-to-total correlation of 0.21–0.72.[19]

Data Analysis

Descriptive statistics were used to analyze sociodemographic data and main variables through frequency (%), mean (SD). Multiple logistic regression examined the relationship between psychological and sociodemographic factors with depression levels, adjusted odds ratio (AOR) with a 95% confidence interval (CI). Statistical significance was defined $p < 0.05$. Model fit was assessed using the Hosmer-Lemeshow test ($p > 0.05$), and Nagelkerke's R^2 measured the explained variance.[20]

Ethical Consideration

The study received ethical approval from the Institutional Review Board of the Health Research Ethics Committee (KEPK) of the Faculty of Health Sciences (Certificate number: E.4.d/042/KEPK/FIKES-UMM/IX/2024).

RESULTS

The participants' mean age was 75.88 (±9.91) years, with most being female (79.2%) and having a secondary education (63.9%). The average length of stay in a nursing home was 2.9 (±3.25) years. Mean scores for MSPSS, UCLA, and MMSE were 59.40 (±14.46), 38 (±9.90), and 21.60 (±6.21), respectively. Most elderly had high social support (61.1%), low loneliness (52.8%), and mild cognitive dysfunction (45.8%) (Table 1).

Multiple logistic regression revealed a significant link between marital status, social support, and depression ($p < 0.05$). Married elderly had a lower depression risk (AOR = 0.177, $p = 0.047$), and higher social support further reduced it (AOR = 0.950, $p = 0.040$). Other factors, including age, gender, education, length of stay, loneliness, and cognitive function, were insignificant ($p > 0.05$). Marital status and social support accounted for 12.2% of depression risk (Nagelkerke's R^2, Table 2).

Table 1. Characteristic Respondent

Characteristic	Result
Age (years)	75.88 (±9.915)
Gender	
Male	15 (20.8%)
Female	57 (79.2%)
Marital Status	
Single	47 (65.2%)
Married	12 (16.7%)
Divorced	13 (18.1%)
Educational Level	
Low Education	17 (23.6%)
Middle Education	46 (63.9%)
Higher Education	9 (12.5%)
Length of Stay (years)	2.9 (±3.254)
Psychological	
MSPSS Score	59.40 (±14.464)
MSPSS Category	
Low Social Support	6 (8.3%)
Moderate Social Support	22 (30.6%)
High Social Support	44 (61.1%)
UCLA Loneliness Score	38 (±9.907)
UCLA Loneliness Category	
Not Loneliness	27 (37.5%)
Low Loneliness	38 (52.8%)
Moderate Loneliness	7 (9.7%)
High Loneliness	0
MMSE Score	21.60 (±6.209)
MMSE Category	
Normal Cognitive Function	12 (16.7%)
Mild Cognitive Function Impairment	33 (45.8%)
Severe Cognitive Function Impairment	27 (37.5%)

Note: MSPSS = Multidimensional Scale of Perceived Social Support; MMSE = Mini Mental State Examination

DISCUSSION

This study found that sociodemographic and psychological factors influence depression levels in nursing home residents.[21,22] Marital status and social support significantly impact depression risk, with married older adults experiencing lower depression rates.[23] However, some studies suggest that marital status has a minimal effect. Depression is more common in those who are divorced, separated, never married, or widowed, especially during retirement or reduce social roles. Having a partner provides emotional and social support, improving well-being and reducing depression risk.[24] Conversely, losing a partner often leads to loneliness and isolation, increasing depression symptoms.[25-28]

This research aligns with psychological and social mechanisms, particularly the role of social support in reducing depression among older adults. Study show that-

Table 2. Sociodemographic and Psychological Relationships to Depression

Variables	AOR (95% CI)	p-value	R^2
Age (years)	1.029 (0.973-1.089)	0.319	0.122
Gender	1.053 (0.248-4.475)	0.944	0.122
Marital Status			
Single	Ref		
Married	0.177 (0.032-0.979)	**0.047**	0.122
Divorced	0.729 (0.176-3.030)	0.664	0.122
Educational Level			
Low Education	Ref		
Moderate Education	1.447 (0.392-5.349)	0.579	0.122
Higher Education	0.949 (0.133-6.749)	0.958	0.122
Length of Stay (years)	0.923 (0.779-1.094)	0.357	0.122
Psychological			
MSPSS Score	0.950 (0.904-0.998)	**0.040**	0.122
MSPSS Category	1.788 (0.555-5.763)	0.331	0.142
UCLA Score	0.980 (0.920-1.044)	0.533	0.122
UCLA Category	1.062 (0.356-3.167)	0.914	0.142
MMSE Score	1.013 (0.920-1.115)	0.797	0.122
MMSE Category	0.840 (0.270-2.608)	0.762	0.142

Note: AOR = Adjusted Odds Ratio; CI = Confidence Interval; MSPSS = Multidimensional Scale of Perceived Social Support; MMSE = Mini Mental State Examination; R^2 = Nagelkerke's R^2; Ref = Reference

elderly individuals who receive support from family, friends, and caregivers experience lower depression levels.[5,6,29-32] However, those with low perceived social support tend to feel lonelier and more depressed.[33] Social support enhances self-esteem and social attachment, helping seniors cope with aging challenges.[34] Men often feel less social support than women, as women are more open about their emotions and actively seek help from caregivers, friends, and relatives.[35] Lack of support can lead to anxiety and depression due to stress appraisal in aging-related health issues.[36] Conversely, strong social support buffers stress and reduces depression levels.[37]

This study contradicts previous findings that age and gender significantly influence depression, with middle-aged and older adults, especially women, being at higher risk.[13,38] It also challenges research linking education level to depression, which suggests higher education reduces symptoms by improving economic security and cognitive function.[39] Many elderly individuals struggle to adapt to nursing homes, leading to stress and loss of control, affecting their quality of life. However, this study found no significant link between place of residence, length of stay, and depression, which is consistent with previous research.[40]

As people age, some move to nursing homes due to declining health and loss, often experiencing loneliness from environmental changes, social isolation, and reduced emotional communication.[41] While some adapt positively, others struggle deeply. This study found no link between loneliness and depression, contradicting previous research showing a strong association.[42] Cognitive impairment, which affects information processing and autonomy, was also not linked to depression in this study, differing from research highlighting its significant impact on mental health.[43] With an aging population and rising depression rates, this issue is expected to become an increasingly critical public and mental health concern.[43-45]

This study has several strengths, including its implementation across four different nursing homes, a well-fitted statistical model based on the Hosmer-Lemeshow test, and its unique analysis of both sociodemographic and psychological factors in depression. However, despite the sample size being based on previous research, future studies should involve a larger sample to enhance result reliability. Additionally, limitations such as the small sample size and cross-sectional design, which prevents establishing causality, must be acknowledged.

CONCLUSIONS AND RECOMMENDATION

This study demonstrates that marital status and social support play a crucial role in reducing depression risk among elderly residents in nursing homes. However, other sociodemographic factors, including age, gender, education level, and length of stay, as well as psychological factors such as loneliness and cognitive function, do not show a significant association with depression. Given these findings, future research should focus on developing targeted interventions that integrate sociodemographic and psychological aspects to improve mental well-being in the elderly. Further studies using a longitudinal design with a larger and more diverse sample are highly recommended to gain a more comprehensive understanding of these relationships and their long-term effects.

REFERENCES

1. Arofah F. Penerapan Regresi Logistik Multinomial untuk Analisis Model Tingkat Depresi pada Lansia. *MATHunesa: Jurnal Ilmiah Matematika*. 2022;10(1):84-93. doi:https://doi.org/10.26740/mathunesa.v10n1.p84-93
2. Novayanti P, Adi M, Widyastuti R. The level of depression in the elderly living in nursing home. *Jurnal Keperawatan Jiwa*. 2020;8(2):117-122. doi:https://doi.org/10.26714/jkj.8.2.2020.117-122

3. Xiong G, Wang C, Ma X. The Relationship between Physical Activity and Mental Depression in Older Adults during the Prevention and Control of COVID-19: A Mixed Model with Mediating and Moderating Effects. *Int J Environ Res Public Health*. Feb 12 2023;20(4)doi:https://doi.org/10.3390/ijerph20043225
4. Dimala CP. PELANA: Pemberdayaan Lansia Aktif Untuk Meningkatkan Kualitas Hidup Lansia Di Masa Pandemi Covid-19. *Jurnal Buana Pengabdian*. 2023;5(1):1-10. doi:https://doi.org/10.36805/jurnalbuanapengabdian.v5i1.5660
5. Asyari H, Ruswadi I. The relationship between family support and levels of depression with the quality of life of elderly during the pandemic period in Pasekan Health Center, Indramayu District year 2022. *Science Midwifery*. 2022;10(5):4130-4138. doi:https://doi.org/10.35335/midwifery.v10i5.980
6. Kartinah K, Al Fatih MF. Family support and depressive symptoms among the elderly in Gunungkidul Health Center Sumberejo-Yogyakarta, Indonesia. *Malahayati International Journal of Nursing and Health Science*. 10/29 2024;7(8):984-990. doi:https://doi.org/10.33024/minh.v7i8.517
7. Nuryati T, Handayani H. Edukasi Pencegahan Dimensia Pada Lansia. *E-Amal: Jurnal Pengabdian Kepada Masyarakat*. 2024;4(2):629-634. doi:https://doi.org/10.47492/eamal.v4i2.3403
8. Organization WH. Depressive disorder (depression). Accessed 11 November, 2024. https://www.who.int/news-room/fact-sheets/detail/depression
9. Muhammad T, Meher T. Association of late-life depression with cognitive impairment: evidence from a cross-sectional study among older adults in India. *BMC Geriatr*. Jun 15 2021;21(1):364. doi:https://doi.org/10.1186/s12877-021-02314-7
10. Seddigh M, Hazrati M, Jokar M, et al. A Comparative Study of Perceived Social Support and Depression among Elderly Members of Senior Day Centers, Elderly Residents in Nursing Homes, and Elderly Living at Home. *Iran J Nurs Midwifery Res*. Mar-Apr 2020;25(2):160-165. doi:https://doi.org/10.4103/ijnmr.IJNMR_109_18
11. Suhartanti O, Suminar E, Eka Sari DJ, Fitrianur WL. Hubungan Dukungan Keluarga Dengan Tingkat Depresi Pada Lansia Di Panti Jompo Lestari Menganti Kab. Gresik. *Jurnal Keperawatan Suaka Insan (JKSI)*. 05/12 2023;8(1):64-71. doi:https://doi.org/10.51143/jksi.v8i1.443
12. Richardson RA, Keyes KM, Medina JT, Calvo E. Sociodemographic inequalities in depression among older adults: cross-sectional evidence from 18 countries. *Lancet Psychiatry*. Aug 2020;7(8):673-681. doi:https://doi.org/10.1016/s2215-0366(20)30151-6
13. Zhao D, Niu M, Zhang S, et al. Factors associated with adaptation level in the older adult residential care facilities: a path analysis. *Front Public Health*. 2023;11:1085399. doi:https://doi.org/10.3389/fpubh.2023.1085399
14. Wang X, Cheng Z. Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations. *CHEST*. 2020;158(1):S65-S71. doi:https://doi.org/10.1016/j.chest.2020.03.012
15. Gunawan I, Huang X-Y. Prevalence of depression and its related factors among older adults in Indonesian nursing homes. *Belitung Nursing Journal*. 06/28 2022;8(3):222-228. doi:https://doi.org/10.33546/bnj.2075
16. Sulistiani W, Fajrianthi F, Kristiana I. Validation of the Indonesian Version of the Multidimensional Scale of Perceived Social Support (MSPSS): A Rasch Model Approach. *Jurnal Psikologi*. 04/30 2022;21:89-103. doi:https://doi.org/10.14710/jp.21.1.89-103
17. Bottaro R, Valenti GD, Faraci P. Assessment of an Epidemic Urgency: Psychometric Evidence for the UCLA Loneliness Scale. *Psychol Res Behav Manag*. 2023;16:2843-2855. doi:https://doi.org/10.2147/PRBM.S406523
18. Komala DW, Novitasari D, Sugiharti RK, Awaludin S. Mini-Mental State Examination to Assess Cognitive Function in Elderly. *Jurnal Keperawatan Malang*. 2021;6(2):95-107. doi:https://doi.org/10.36916/jkm.v6i2.137
19. Ariani TA, Anna A, Rahayu HT, et al. Psychometric testing of the indonesian version of beck depression inventory-ii among Indonesian floods survivors. *Jurnal Ners*. 09/30 2023;18(3):264-273. doi:https://doi.org/10.20473/jn.v18i3.47313
20. Aini N, inayah z. *Biostatistika dan Aplikasi program*. 2019.
21. Fang B-J, Leong K-S, Tan H-X. A cross-lagged analysis of the relationship between marital quality and depression among the older adults: gender effects of socioeconomic status. Original Research. *Frontiers in Psychology*. 2025-January-15 2025;16doi:https://doi.org/10.3389/fpsyg.2025.1389801
22. Pan L, Li L, Peng H, et al. Association of depressive symptoms with marital status among the middle-aged and elderly in Rural China–Serial mediating effects of sleep time, pain and life satisfaction. *Journal of Affective Disorders*. 2022/04/15/ 2022;303:52-57. doi:https://doi.org/10.1016/j.jad.2022.01.111
23. Zhao L, Zhang K, Gao Y, Jia Z, Han S. The relationship between gender, marital status and depression among Chinese middle-aged and older people: Mediation by subjective well-being and moderation by degree of digitization. Original Research. *Frontiers in Psychology*. 2022-October-17 2022;13doi:https://doi.org/10.3389/fpsyg.2022.923597
24. Tabassum T, Suzuki T, Iwata Y, Ishiguro H. Depression and Associated Factors Among the Elderly Population in an Urban Tertiary Geriatric Hospital in Bangladesh. *Gerontology and Geriatric Medicine*. 2023;9:23337214231178145. doi:https://doi.org/10.1177/23337214231178145
25. Daely S, Nuraini T, Gayatri D, Pujasari H. Impacts of age and marital status on the elderly's quality of life in an elderly social institution. *J Public Health Res*. Dec 1 2021;11(2)doi:https://doi.org/10.4081/jphr.2021.2731
26. Haghighi P, Oremus M. Examining the association between functional social support, marital status, and

memory: a systematic review. *BMC Geriatrics*. 2023/05/12 2023;23(1):290. doi:https://doi.org/10.1186/s12877-023-03982-3
27. Zhang Z, Hsieh N, Lai W-H. Social relationships in later life: Does marital status matter? *Journal of Social and Personal Relationships*. 09/01 2023;40:2946-2968. doi:https://doi.org/10.1177/02654075231163112
28. Cendani A, Karin PAES, Sulistiowati NMD, Swedarama K. The Relationship Between Stress and Loneliness with Depression in the Elderly People. *Babali Nursing Research*. 07/26 2023;4:372-381. doi:https://doi.org/10.37363/bnr.2023.43255
29. Acoba EF. Social support and mental health: the mediating role of perceived stress. *Frontiers in Psychology*. 2024;15:1330720. doi:https://doi.org/10.3389/fpsyg.2024.1330720
30. Hosseini FS, Sharifi N, Jamali S. Correlation Anxiety, Stress, and Depression with Perceived Social Support Among the Elderly: A Cross-Sectional Study in Iran. *Ageing International*. 2021/03/01 2021;46(1):108-114. doi:https://doi.org/10.1007/s12126-020-09376-9
31. Li P, Zhong J, He Y, Yan H, Xie M, Meng L. Loneliness and depression among community-dwelling older adults in China during the COVID-19 epidemic: The mediating role of social support. *Medicine*. 2023;102(37):e35171. doi:https://doi.org/10.1097/md.0000000000035171
32. Zanjari N, Momtaz YA, Kamal SHM, Basakha M, Ahmadi S. The Influence of Providing and Receiving Social Support on Older Adults' Well-being. *Clin Pract Epidemiol Ment Health*. 2022;18:e174501792112241. doi:https://doi.org/10.2174/17450179-v18-e2112241
33. Gurrapu R, Ammapattian T, Antony S. Perceived social support, loneliness, and depression among elderly living in old-age homes. *J Family Med Prim Care*. Mar 2024;13(3):864-868. doi:https://doi.org/10.4103/jfmpc.jfmpc_799_23
34. Sarla E, Lambrinou E, Galanis P, Kalokairinou A, Sourtzi P. Factors That Influence the Relationship Between Social Support and Health-Related Quality of Life of Older People Living in the Community. *Gerontol Geriatr Med*. Jan-Dec 2020;6:2333721420911474. doi:https://doi.org/10.1177/2333721420911474
35. Hu J, Fitzgerald SM, Owen AJ, et al. Social isolation, social support, loneliness and cardiovascular disease risk factors: A cross-sectional study among older adults. *International Journal of Geriatric Psychiatry*. 2021;36(11):1795-1809. doi:https://doi.org/10.1002/gps.5601
36. Zhao L, Zheng X, Ji K, et al. The Relationship between Social Support and Anxiety among Rural Older People in Elderly Caring Social Organizations: A Cross-Sectional Study. *Int J Environ Res Public Health*. Sep 10 2022;19(18)doi:https://doi.org/10.3390/ijerph191811411
37. Wang J, Xue J, Jiang Y, Zhu T, Chen S. Mediating effects of depressive symptoms on social support and quality of life among rural older Chinese. *Health and Quality of Life Outcomes*. 2020/07/20 2020;18(1):242. doi:https://doi.org/10.1186/s12955-020-01490-1
38. Xue Y, Lu J, Zheng X, et al. The relationship between socioeconomic status and depression among the older adults: The mediating role of health promoting lifestyle. *Journal of Affective Disorders*. 2021/04/15/ 2021;285:22-28. doi:https://doi.org/10.1016/j.jad.2021.01.085
39. Zhao R, Wang J, Lou J, et al. The effect of education level on depressive symptoms in Chinese older adults-parallel mediating effects of economic security level and subjective memory ability. *BMC Geriatr*. Jul 29 2024;24(1):635. doi:https://doi.org/10.1186/s12877-024-05233-5
40. Mumulati SB, Niman S, Indriarini MY. Relationship of Education, Age, Gender, Marital Status and Long Stay at Nursing Homes with Depression Events in Elderly. *Jurnal Keperawatan Jiwa*. 2020;8(3):329-336. doi:https://doi.org/10.26714/jkj.8.3.2020.329-336
41. Zhang D, Lu Q, Li L, Wang X, Yan H, Sun Z. Loneliness in nursing homes: A qualitative meta-synthesis of older people's experiences. *J Clin Nurs*. Oct 2023;32(19-20):7062-7075. doi:https://doi.org/10.1111/jocn.16842
42. Van As BAL, Imbimbo E, Franceschi A, Menesini E, Nocentini A. The longitudinal association between loneliness and depressive symptoms in the elderly: a systematic review. *International Psychogeriatrics*. 2022/07/01/ 2022;34(7):657-669. doi:https://doi.org/10.1017/S1041610221000399
43. Aajami Z, kazazi L, Troski M, Bahrami M, Borhaninejad V. Relationship between Depression and Cognitive Impairment among Elderly: A Cross-sectional Study. *J Caring Sci*. 2020/8/18 2020;9(3):148-153. doi:https://doi.org/10.34172/jcs.2020.022
44. Khodadadi S, Pourhadi S, Hosseini SR, Sum S, Kheirkhah F, Mohammadi Z. Investigating the Relationship Between Social Support, Cognitive Status, and Depression With Daily Life Activities of the Elderly in Amirkola City. Research. *Salmand: Iranian Journal of Ageing*. 2022;17(1):2-15. doi:https://doi.org/10.32598/sija.2021.593.4
45. Camacho-Conde JA, Galán-López JM. The relationship between depression and cognitive deterioration in elderly persons. *Psicologia: Teoria e Pesquisa*. 2021;37:e37413. doi:https://doi.org/10.1590/0102.3772e37413.