

## THE RELATIONSHIP BETWEEN THE LEVEL OF LONELINESS AND THE LEVELS OF ANXIETY AND DEPRESSION AMONG MEMBERS OF THE PURI TANJUNG MEKAR ELDERLY CLUB

<sup>1</sup>Ni Ketut Sri Diniari<sup>\*</sup><sup>1</sup>, Luh Nyoman Alit Aryani<sup>1</sup>,

Nyoman Defriyana Suwandi<sup>2</sup>, Ervinna Agatha Winarso<sup>2</sup>, Monica Sandra<sup>2</sup>

<sup>1</sup>Departement/KSM Psychiatric, RSUP Prof Dr. I. G. N. G. Ngoerah, Faculty of Medicine, Universitas Udayana

<sup>2</sup>Psychiatry Specialist Study Program, Faculty of Medicine, Universitas Udayana

E-mail Correspondence \*: [sridiniari@ymail.com](mailto:sridiniari@ymail.com)

### ABSTRACT

**Background:** Loneliness is a global issue affecting individuals of all ages, especially the elderly. The elderly are more susceptible to loneliness due to reduced social interactions and the loss of contact with coworkers. Loneliness significantly impacts both physical and mental health, most often anxiety and depression. This greatly affects the quality of life of the elderly. The study aims to determine the relationship between loneliness and levels of anxiety and depression among members of the Puri Tunjung Mekar elderly club Denpasar, Bali.

**Methods:** The research method was quantitative analytical with a cross-sectional design. Data was obtained from interview and questionnaire of UCLA Loneliness Scale (Version 3), Geriatric Anxiety Inventory, and Geriatric Depression Scale. **Results:** Elderly with mild loneliness experience moderate anxiety and mild depression, but all elderly with severe loneliness experience severe anxiety and depression. Fisher exact test indicated a significant association between loneliness and anxiety ( $p = 0.023$ ), and between loneliness and depression ( $p = 0.001$ ).

**Conclusions:** These findings highlight a significant relationship between loneliness and anxiety and depression among the elderly. Understanding the relationship between loneliness and mental issue has become a concern for various parties to give a comprehensive management so that the quality of life of the elderly is optimal.

**Keywords :** *Loneliness; Elderly; Anxiety; Depression*

### INTRODUCTION

Aging is part of the natural developmental process in the life of every living being.<sup>1,2</sup> The elderly are a population highly at risk of illness, disability, social isolation, loneliness, or psychological distress such as anxiety and depression that may require long-term care.<sup>1,3-6</sup> Based on data from the World Health Organization (WHO), the population of people aged 60 years and above is larger than children aged less than 5 years, and is expected to continue to increase.<sup>1,7</sup> Indonesia, the number of elderly has been increasing over the past few decades, with an estimated 16 million elderly (6.1% of the population) in 2019.<sup>8,9</sup> With this considerable increase in the number of elderly, mental health problems in the elderly can also increase. One condition that is often felt by people with elderly age is the feeling of loneliness.

Loneliness is a painful emotional state caused by a lack of congruence between the meaningful social relationships a person desires and the relationships they experience.<sup>10,11</sup> Loneliness is increasingly recognized as a serious public health problem worldwide, especially in the elderly. Various psychological models suggest that loneliness has social, cognitive and biological impacts that may increase the risk of anxiety and depression in

later life.<sup>10,12</sup> A study showed that anxiety and depression are among the top ten causes of disability in the world, and depression in the elderly has an estimated prevalence of 4-9% worldwide, leading to significant morbidity and mortality.<sup>9</sup> Based on Riset Kesehatan Dasar in Indonesia, the prevalence of depression in people over 15 years old in 2018 was estimated at 6.1%, with only 9% receiving treatment for this condition, while for the prevalence of anxiety disorders in the elderly in Indonesia contributed 3.3% of the total elderly with anxiety disorders in the world.<sup>8,13</sup>

From these data and the impact of mental problems that are particularly common in the elderly population, it is necessary to conduct research on the relationship between the level of loneliness and the level of anxiety and depression which aims to enrich the understanding of the relationship between loneliness, anxiety, and depression in the elderly. This research is expected to provide a solid empirical basis for efforts to prevent and treat mental health problems, and improve the quality of life in the elderly population.

## METHODS AND PROCEDURES

The research method uses a quantitative analytic approach with a cross sectional design to determine the relationship between the level of loneliness and the level of anxiety and depression in the elderly. The research was conducted at Club Lansia Puri Tanjung Mekar in June-September 2024. Data collection methods were obtained from interviews and measurement of loneliness using the UCLA Loneliness Scale Questionnaire (Version 3). Measurement of anxiety level using the Geriatric Anxiety Inventory, while the level of depression using the Geriatric Depression Scale. Loneliness level, anxiety level and depression level were classified into mild, moderate and severe.

Research sampling used purposive sampling method. The number of samples in this study were 65 people. The sample in this study were elderly over 60 years old at the Tanjung Mekar Elderly Club. Elderly people who refused to participate in the study, who had a history of seeing a psychiatrist and were diagnosed with anxiety and depression, and who were experiencing severe illness where the subject was unable to communicate were excluded from the study. This sampling went through several stages such as coordinating with the organizers of Puri Tanjung Mekar

**Table 1.** Research characterization data

Characteristics	Total	
	n	%
Sex		
Male	0	0
Female	65	100
Age		
60-70 years old	63	96,9
71-80 years old	2	3,1
81-90 years old	0	0
Educational status		
Elementary	32	49,2
Junior High	8	12,3
Senior High	23	35,4
Bachelor (S1)	2	3,1
Residential status		
Alone	4	6,2
With Partner	12	18,5
With Family	49	75,4
Occupational status		
Unemployed	43	66,2
Employed	22	33,8
Income		
Below UMP	3	4,6
Above UMP	62	95,4

The majority of subjects experienced mild loneliness (81.5%), moderate anxiety (52.3%), and mild depression

Elderly Club, then conducting initial data collection on samples that met the inclusion criteria by providing informed consent. After that, interviews and measurements were made with a questionnaire.

Data from the research instruments were collected and inputted into the Statistical Package for the Social Sciences (SPSS) application in stages, then processed to calculate the description of the level of loneliness, anxiety, and depression. Data analysis used the chi square test to see the relationship between the level of loneliness with the level of anxiety and depression. If the chi square requirement is not met, an alternative test is used.

## RESULT

A total of 65 subjects of the Puri Tanjung Mekar Elderly Club were included in this study. In this study, all subjects were female (100%), with an age range between 60 to 80 years old and most were from the 60-70 years old age group (96.9%). Most of the subjects had primary school education (49.2%), lived with family (75.4%), did not work (66.2%), and their financial status was above the provincial minimum wage (UMP) (95.4%) (Table 1).

(52.8%). An overview of the level of loneliness, anxiety level, and depression level can be seen in Table 2.

**Table 2.** Description of loneliness level, anxiety level, and depression level

Variable	f	n = 65	Proportion (%)
Loneliness level			
Mild	53		81,5
Moderate	10		15,4
Severe	2		3,1
Anxiety level			
Mild	25		38,5
Moderate	34		52,3
Severe	6		9,2
Depression level			
Mild	35		53,8
Moderate	28		43,1
Severe	2		3,1

Most subjects with elementary school education were at a moderate level of anxiety (59.4%). A total of 4 subjects who lived alone all experienced severe anxiety level (100%). In the group of subjects who lived with a partner, most experienced a moderate level of anxiety (83.3%). The majority of subjects who unemployed were in the moderate

anxiety level (62.8%). A total of 3 subjects with a status below UMP were at a severe anxiety level (100%). In contrast, subjects with financial status above UMP mostly experienced moderate anxiety (54.8%). An overview of anxiety level based on subjects characteristics can be seen in Table 3.

**Table 3.** Anxiety level based on subject characteristics

Characteristics	Mild		Moderate		Severe	
	n	%	n	%	n	%
<b>Educational status</b>						
Elementary	8	25	19	59,4	5	15,6
Junior high	2	25	6	75	0	0
Senior high	13	56,5	9	39,1	1	4,3
Bachelor	2	100	0	0	0	0
<b>Residential status</b>						
Alone	0	0	0	0	4	100
With partner	0	0	10	83,3	2	16,7
With family	25	51	24	49	0	0
<b>Occupational status</b>						
Unemployed	10	23,3	27	62,8	6	14
Employed	15	68,2	7	31,8	0	0
<b>Income</b>						
Below UMP	0	0	0	0	3	100
Above UMP	25	40,3	34	54,8	3	4,8

Meanwhile, the majority of subjects with primary school education had moderate depression (56.2%). Subjects who lived alone were equally divided between moderate and severe depression (50% each). Most subjects who were unemployed were moderately depressed (60.5%).

Subjects with an income below UMP had a moderate level of depression (66.7%). The description of the level of depression based on subject characteristics can be seen in detail in Table 4.

**Table 4.** Depression level based on subject characteristics

Characteristics	Mild		Moderate		Severe	
	n	%	n	%	n	%
<b>Educational status</b>						
Elementary	12	37,5	18	56,2	2	6,3
Junior high	3	37,5	5	62,5	0	0
Senior high	18	78,3	5	21,7	0	0
Bachelor	2	100	0	0	0	0
<b>Residential status</b>						
Alone	0	0	2	50	2	50
With partner	0	0	12	100	0	0
<b>Occupational status</b>						
Unemployed	15	34,9	26	60,5	2	4,6
Employed	20	90,9	2	9,1	0	0
<b>Income</b>						
Below UMP	0	0	2	66,7	1	33,3
Above UMP	35	56,5	26	41,9	1	1,6

Fisher's Exact test was used in this study because more than 20% of the cells had an expectation value of less than 5 so the Chi-Square test was not valid. In the level of loneliness and anxiety, a significant relationship was found

with a p value = 0.023. Subjects with low loneliness experienced more moderate anxiety (50.9%), while those with severe loneliness all experienced severe anxiety (100%) (Table 5).

**Table 5.** Anxiety level based on loneliness level

Level of loneliness	Anxiety Level					
	Mild		Moderate		Severe	
	n	%	n	%	n	%
Mild	22	41,5	27	50,9	4	7,6
Moderate	3	30	7	70	0	0
Severe	0	0	0	0	2	100
P value: 0,023*						

There was also a significant relationship between the level of loneliness and depression with a p value = 0.001. Subjects who experienced mild loneliness tended to experience mild depression (54.7%), while those who

experienced severe loneliness all experienced severe depression (100%) (Table 6).

**Table 6.** Depression level based on loneliness level

Level of loneliness	Depression Level					
	Mild		Moderate		Severe	
	n	%	n	%	n	%
Mild	29	54,7	24	45,3	0	0
Moderate	6	60	4	40	0	0
Severe	0	0	0	0	2	100
P value: 0,001*						

## DISCUSSION

The majority of subjects experienced mild loneliness (81.5%), moderate anxiety (52.3%), and mild depression (52.8%). This can identify that loneliness can be one of the factors causing the elderly to experience mental health problems, namely anxiety and depression, which is in line

with the results of research from Abdoli et al. and Adawiyah et al in 2022.<sup>13-16</sup>

Meanwhile, the majority of subjects with elementary school education had moderate levels of depression (56.2%). Subjects who lived alone were equally divided between moderate and severe depression (50%

each). Most subjects who were not working were moderately depressed (60.5%). Subjects with financial status below UMP had moderate depression (66.7%). Elderly people who live alone without adequate social and economic support are more likely to be at risk of psychological problems, this is the same as that obtained from previous studies where elderly people with low levels of social support and resilience are very vulnerable to experiencing symptoms of depression and anxiety. Likewise, increased rates of depressive disorders are associated with economic problems.<sup>10,12,15-18</sup>

In the level of loneliness and anxiety, a significant relationship was found with a p value = 0.023. Subjects with low loneliness experienced more moderate anxiety (50.9%), while those with severe loneliness all experienced severe anxiety (100%). There was also a significant relationship between the level of loneliness and depression with a p-value = 0.001. Subjects who experienced mild loneliness tended to experience mild depression (54.7%), while those who experienced severe loneliness all experienced severe depression (100%). The findings in this study support several previous studies which say that loneliness has a positive correlation that causes anxiety and depression. Increasing loneliness scores have an effect in increasing symptoms of depression and anxiety in the elderly.<sup>10,15,19-21</sup>

## CONCLUSION

From the results of this study, it can be concluded that there is a relationship between the level of loneliness and the level of anxiety and depression in the elderly. It is important to carry out prevention, comprehensive management, especially psychosocial interventions by involving all parties, so as to reduce the level of loneliness, anxiety, and depression in the elderly.

## ACKNOWLEDGMENTS

The authors would like to thank all parties of Udayana University and Prof. I. G. N. G. Ngoerah Hospital involved in this study.

## FUNDING OF THE RESEARCH

This research was funded by Program Penelitian Unggulan Program Studi (PUPS of the Faculty of Medicine, Udayana University.

## CONFLICT OF INTEREST

The authors declared that there are no conflicts of interest/

## ETHICAL CLEARANCE

This study has received approval from the Research Ethics Committee of the Faculty of Medicine, Udayana University. Each participant was given a clear explanation of the purpose and procedures of the study, as well as their right to refuse or withdraw from the study at any time without any

consequences. The data obtained is guaranteed to remain confidential and is used solely for research purposes.

## REFERENCES

- Barakat MM, Elattar NF, Zaki HN. Depression, Anxiety and Loneliness among Elderly Living in Geriatric Homes. *Am J Nurs Res.* 2019; 7(4):400-11.
- O'Luanagh C, Lawlor BA. Loneliness and the health of older people. *Int J Geriatr Psychiatry.* 2008;23(12):1213-21.
- Wang J, Sun Y, Zhang D, Liu Y, Wang Y, Wang L. Associations between loneliness and frailty among older adults: Evidence from the China Health and Retirement Longitudinal Study. *BMC Geriatr.* 2022;22:3044.
- Wang H, Hou Y, Zhang L, Yang M, Deng R, Yao J. Chinese elderly migrants' loneliness, anxiety and depressive symptoms: The mediation effect of perceived stress and resilience. *Front Public Health.* 2022;10:998532.
- Mukharomah S, Habibullah M. Relationship Between Psychological Well-Being and Loneliness in Elderly Who Choose to Remain Single. *Proyeksi: J Psikol.* 2021;16(1):43-51.
- Tosepu R, Gunawan J, Effendy C, Ahmad J. Depression Among Older Adults in Indonesia: Prevalence, Role of Chronic Conditions, and Other Associated Factors. *F1000Res.* 2023;12:400. doi:10.12688/f1000research.129085.2
- World Health Organization (WHO). Ageing and health [Internet]. Geneva: WHO; 2022 [cited 2025 May 17]. Available from: <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health>
- Handajani YS, Schröder-Butterfill E, Hogervorst E, Turana Y, Hengky A. Depression among Older Adults in Indonesia: Prevalence, Role of Chronic Conditions and Other Associated Factors. *Clin Pract Epidemiol Ment Health.* 2022; 18:e174501792207010.
- Sadock, B. J., Normal Development and Aging - Middle Adulthood. In: R. J. Boland, M. L. Verduin, P. Ruiz & A. Shah, eds. *Kaplan & Sadock's Synopsis of Psychiatry.* Philadelphia: Wolters Kluwer; 2022. p. 911.
- Lee SL, Pearce E, Ajnakina O, Johnson S, Lewis G, Mann F, et al. The association between loneliness and depressive symptoms among adults aged 50 years and older: a 12-year population-based cohort study. *Lancet Psychiatry.* 2021; 8(1):48-57.
- Holt-Lunstad J. Social connection as a critical factor for mental and physical health: evidence, trends, challenges, and future implications. *World Psychiatry.* 2024;23(3):312-32.
- Song C, Yao L, Chen H, Song Y, Liu L. Prevalence and factors influencing depression among empty nesters in China: A meta-analysis. *BMC Geriatr.* 2023 May 30;23(1):333.
- Utami LT, Silvitasari I. Tingkat Kecemasan Berhubungan Tingkat Kemandirian Lansia Di Posyandu Mawar X Pajang Laweyan. *Nurs News J Ilm Keperawatan.* 2022; 6:144-52.
- Yang X. Grey Matters: The Unique Landscape of Depression Treatment in Older Adults. *Psychology.* 2023;14(7):1234-45
- Abdoli N, Salari N, Darvishi N, Jafarpour S, Solaymani M, Mohammadi M, et al. The global prevalence of major depressive disorder (MDD) among the elderly: A systematic review and meta-analysis. *Neurosci Biobehav Rev.* 2022; 132:1067-73.
- Jalali A, Ziapour A, Karimi Z, Rezaei M, Emami B, Pourmirza Kalhori R, et al. Global prevalence of depression, anxiety, and

stress in the elderly population: a systematic review and meta-analysis. *BMC Geriatr.* 2024;24:809.

17. Li J, Zhou X, Wang Q. Interventions to reduce loneliness among Chinese older adults: A network meta-analysis of randomized controlled trials and quasi-experimental studies. *Appl Psychol Health Well-Being.* 2023;15(1):123–45.

18. Park S, Smith J, Dunkle RE, Ingersoll-Dayton B, Antonucci TC. Health and social-physical environment profiles among older adults living alone: associations with depressive symptoms. *J Gerontol B Psychol Sci Soc Sci.* 2019;74(4):675–84.

19. Adawiyah SR, Anwar S, Nurhayati N. Tingkat Kecemasan pada Lansia yang Dilakukan Terapi Teknik Relaksasi Otot Progresif dan Terapi Reminiscence. *J Kesehatan.* 2022; 13:150–5.

20. Roberts R, Krueger J. Loneliness and the emotional experience of absence. *South J Philos.* 2021;59(3):377–96.

21. Honjo K, Tani Y, Saito M, et al. Living alone or with others and depressive symptoms, and effect modification by residential social cohesion among older adults in Japan: the JAGES longitudinal study. *J Epidemiol.* 2018;28(7):315–2

