




Retirement leisure: association of loneliness and social support network with depression in older adults – a cross-sectional study

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Abstract

Objective: To determine whether loneliness and social support network characteristics are associated with depression among retired older adults. **Method:** An observational, cross-sectional, analytical study was conducted. The sample comprised 144 older adults. The inclusion criterion was being an older adult with preserved communication ability and cognition, assessed using the Kahn Mental Status Questionnaire. Participants not meeting the criteria established by this instrument were excluded. The instruments used were the UCLA Loneliness Scale (UCLA-BR), the Geriatric Depression Scale (GDS-15), and the Medical Outcomes Study Social Support Scale (MOS-SSS). Sociodemographic variables included age, sex, religion, education, monthly income, marital status, falls in past month, polypharmacy, comorbidities, length of retirement, and self-rated health. **Results:** Mild-to-moderate levels of loneliness ($p < 0.001$), low emotional support ($p < 0.003$), low affective support ($p < 0.002$), and low positive social interaction ($p < 0.001$), as well as the predictors presence of comorbidities ($p < 0.021$), fair or poor perceived health ($p < 0.001$), monthly income below the minimum wage ($p < 0.022$), and being single ($p < 0.041$), were significantly associated with depressive symptoms. **Conclusion:** The study revealed that loneliness, low emotional, affective and positive social interaction support, as well as comorbidities, poor perceived health, low income, and being single, increased vulnerability to depression among the retired older adults.

Keywords: Older Adults.
Loneliness. Depression.
Social Support.

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INTRODUCTION

The most marked growth in the Brazilian population has occurred among the stratum of older adults, which showed an annual growth of over 4% between 2012 and 2022. The national population aged 60 years or older, estimated at 14.2 million in 2000, is projected to reach 73.5 million by 2060. Over the next 10 years, an annual increase of over 1 million older adults is expected¹.

The demographic change seen today has a significant impact on society, raising concerns about the sustainability of health and social welfare systems, while also posing new challenges for the development of public policies². In this scenario, understanding the determinants that influence rate of cognitive decline and ways of preserving cognitive performance during late life has become increasingly relevant³.

The "use it or lose it" theory suggests that cognitive performance tends to deteriorate when the individual is not mentally challenged or stimulated. Thus, retirement may increase the risk of more rapid cognitive decline due to the reduction in cognitively demanding activities after stopping working. However, this negative effect of retirement can vary among different occupational groups. People in professions with high intellectual demands are expected to experience less age-related decline while still working, compared to those in occupations with lower mental demands^{3,4}.

Retirement typically causes people to lose access to social contacts, lifestyles and daily routines, as well as potential stimuli, activities and purpose, which may lead to depressive symptoms such as loneliness and hopelessness⁵. In addition to these aspects, given the value that work holds in contemporary society as a means of achieving recognition and social status⁶, the post-retirement period directly impacts the social valorization of older adults, as well as their self-esteem, which may also contribute to the development of depression.

Leisure, in this context, becomes a relevant factor to be considered. Although it may represent an opportunity for rest and recreation, excessive leisure without meaningful activities can intensify the feelings of loneliness and isolation already present in

the post-retirement period. The loss of routine and social contacts, coupled with a lack of engagement in activities that promote interaction and purpose, can make free time a negative experience, increasing the risk of psychological distress and depression. Therefore, it is crucial that leisure be balanced with social and recreational activities that promote belonging, thereby helping to preserve the mental health of older adults⁷.

Given that loneliness, weakening of the social support network and depression are common in older adults, the rationale behind this study was to address a prevalent problem that significantly compromises quality of life and also increases the risk of comorbidities and mortality. In this context, strategies that promote social engagement, cognitive stimulation and maintenance of life purpose after retirement, become fundamental for mitigating the negative effects of cognitive decline and depressive disorders in this population. Understanding these factors is essential to inform public policies and support the development of effective interventions to foster healthy aging and improve quality of life of older adults.

Against this backdrop, the objective of the present study was to determine whether loneliness and social support network characteristics are associated with depression in retired older adults.

METHOD

An observational, cross-sectional, analytical study, involving older adults from a city in the interior of Minas Gerais state, was conducted. The sample size calculation was based on an estimated prevalence of depression of 6% in older adults, an alpha error of 5%, one-tailed test, normal distribution, and a minimum statistical power of 80%, giving an estimated sample of 144 participants. The reference rate adopted for the calculation was based on data from the World Health Organization, which estimates that depression affects 4.8% of the world population and 5.8% of the Brazilian population.

Mental status assessment was used as an inclusion criterion. Thus, retired older adults with preserved communication and cognitive abilities were

included, as measured by the Kahn Mental Status Questionnaire, a validated instrument adapted for use in Brazil. Individuals scoring below the cutoff point, indicating the presence of signs of cognitive impairment, as well as those who could not read, a requirement for understanding the scales applied, were excluded.

Given the cross-sectional design of the study, the recommendations of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE)⁸ were followed.

Data collection was carried out between March and April 2025 by a previously trained team, ensuring standardization of procedures and uniformity in the application of the instruments. The training consisted of theoretical alignment activities and interview simulations, in order to minimize disparities among evaluators. Individual interviews were conducted in community locations with high circulation, such as squares, parks, and bus stops. The cognitive assessment did not involve clinical examinations or specialized medical evaluation, being based solely on the validated instrument, an aspect taken into account as a study limitation.

The cognitive assessment was the first procedure, entailing application of the Kahn Mental Status Questionnaire, originally developed by Kahn et al. in 1960 in "Brief Objective Measures for the Determination of Status in the Aged" and culturally adapted and validated for Brazil⁹. This abbreviated 10-item questionnaire assesses temporal-spatial orientation and memory for remote facts. Participants had to answer at least 7 questions correctly to meet the basic criteria of temporal-spatial orientation for inclusion in the study¹⁰.

Subsequently, sociodemographic and clinical information was collected using a structured questionnaire devised by the authors for the purposes of this study, containing closed items probing sex, age, religion, education, monthly income, marital status, history of falls in last month, use of multiple medications (polypharmacy), self-reported comorbidities, length of retirement, and perceived health.

Depression among the retired older adults was measured using the Geriatric Depression Scale (GDS-15)¹¹. The GDS is a widely used validated diagnostic instrument for depression in older adults¹². This scale has 15 negative affirmative questions, scoring 1 or 0 points. A total sum of scores of 0-5 is deemed normal; 6-10 indicates mild-to-moderate depression, and 11-15 severe depression.

Loneliness was assessed using the UCLA-BR Loneliness Scale¹³. The scale, originally called the University of California Los Angeles (UCLA) Loneliness Scale, has been adapted and validated for use in Brazil. The UCLA-BR consists of 20 questions, probing social interaction (how the person relates) and isolation (withdrawal from social interaction); with responses scored as 0-3 for each item. Regarding scale scores: 0-22 points indicates minimal loneliness; 23-35, mild loneliness; 36-47, moderate loneliness; and 48-60, intense loneliness¹⁴.

Social support network was assessed using the Portuguese version of the Medical Outcomes Study (MOS) Social Support Scale¹⁵ validated for Brazil⁹. The questionnaire contains 19 items covering the following functional dimensions of social support: material, affective, positive social interaction, and emotional/informational. Participants must indicate their perceived frequency of each type of available support: never, rarely, sometimes, almost always, or always⁹.

For each item, the participant must indicate how often they consider each type of support available: never, rarely, sometimes, almost always, or always, and the interpretive scores are⁹: Material support: ≤6: Low perception; 7-13: Medium perception; ≥14: High perception. Affective support: ≤4: Low perception; 5-10: Medium perception; ≥11: High perception. Emotional/informational support: ≤12: Low perception; 13-28: Medium perception; ≥29: High perception. Positive social interaction: ≤6: Low perception; 7-13: Medium perception; ≥14: High perception.

The project was approved by the Research Ethics Committee (CEP) of the Medical School of Itajubá (FMIT), under approval No. 7.416.538, and

complied with all recommendations of Resolution Nos. 466/2012¹⁶ and 510/2016¹⁷, which provide for ethics guidelines applicable to research involving humans in Brazil.

Descriptive statistics were employed for data analysis, with categorical variables expressed as frequency and percentage. The following statistical procedures were used for associations: chi-square, Cramer's V, and Wald test. An error measure of 5% (0.05) was adopted for statistical significance, with a 95% confidence interval.

Inferential analysis was performed using a multivariate logistic regression model. Parameter estimation of the model was based on the Maximum Likelihood Estimation (MLE) method, using the Newton-Raphson optimization algorithm to maximize the log-likelihood function and fit the logit link function to the data. For the selection of independent variables, an automated stepwise methodology (hybrid) was adopted. The decision criterion for iterative inclusion and exclusion of predictors was based on the Wald test statistic. Thus, the final model retained only variables that had statistically significant coefficients, ensuring a parsimonious and well-fitting multivariate model.

DATA AVAILABILITY

The full data set underpinning the study results is available from Figshare.com at <https://doi.org/10.6084/m9.figshare.30924161>.

RESULTS

The sociodemographic and health profile of the older adults evaluated, as well as the relationship of these variables with the presence of depressive symptoms, are presented in Table 1. The results show which characteristics were most strongly associated with depression in the group studied, highlighting the major differences across the categories analyzed.

Table 2 provides a summary of the distribution of loneliness levels among participants and their association with depressive symptoms. Increased loneliness shows an association with higher rate of depression, highlighting the role of this variable in the context analyzed.

The nature of the associations between the social support network domains and the presence of depressive symptoms are presented in Table 3. The data set reveals those social support dimensions which had the greatest influence on the mental health of the retired older adults.

The odds ratios of the predictors found to be statistically significant are shown in Table 4, allowing estimation of the magnitude of risk associated with each category analyzed in terms of depressive symptoms.

The multivariate model with the predictors that remained significant after adjustment are presented in Table 5. This shows the strength of association between each variable and depressive symptoms, identifying independent factors with the greatest impact.

Table 1. Sociodemographic and health characteristics and association with depression (N=144). Itajubá, Minas Gerais state, 2025.

Predictor	No depression		Mild/Moderate depression		Severe depression		Total	<i>p</i> -value	
	AF	RF (%)	AF	RF (%)	AF	RF (%)	AF	RF (%)	
Sex									
Female	57	74.0	17	22.1	3	3.9	77	53.5	0.473
Male	53	79.1	14	20.9	0	0.0	67	46.5	
Age (years)									
60 - 69	41	73.2	12	21.4	3	5.4	56	38.9	0.380
70 - 79	50	82.0	11	18.0	0	0.0	61	42.4	
≥ 80	19	70.4	8	29.6	0	0.0	27	18.8	

to be continued

Continuation of Table 1

Predictor	No depression		Mild/Moderate depression		Severe depression		Total	<i>p</i> -value	
	AF	RF (%)	AF	RF (%)	AF	RF (%)	AF	RF (%)	
Religion									
Catholic	85	79.4	20	18.7	2	1.9	107	74.3	0.571
Catholic, Spiritist	1	100.0	0	0.0	0	0.0	1	0.7	
Spiritist	3	60.0	2	40.0	0	0.0	5	3.5	
Evangelical	15	65.2	8	34.8	0	0.0	23	16.0	
Other	1	100.0	0	0.0	0	0.0	1	0.7	
No religion	5	71.4	1	14.3	1	14.3	7	4.9	
Education (years)									
1-4	15	93.8	1	6.2	0	0.0	16	11.1	0.170
5-8	25	73.5	9	26.5	0	0.0	34	23.6	
> 9	68	73.9	21	22.8	3	3.3	92	63.9	
No education	2	100.0	0	0.0	0	0.0	2	1.4	
Monthly income (MW)									
1-2 MW	55	73.3	18	24.0	2	2.7	75	52.1	0.647
> 3 MW	52	80.0	12	18.5	1	1.5	65	45.1	
< 1 MW	3	75.0	1	25.0	0	0.0	4	2.8	
Marital status									
Married	60	83.3	11	15.3	1	1.4	72	50.0	0.166
Divorced	15	71.4	6	28.6	0	0.0	21	14.6	
Single	12	60.0	7	35.0	1	5.0	20	13.9	
Widowed	23	74.2	7	22.6	1	3.2	31	21.5	
Falls in last month									
No	98	79.0	24	19.4	2	1.6	124	86.1	0.077
Yes	12	60.0	7	35.0	1	5.0	20	13.9	
Polypharmacy									
No	63	82.9	12	15.8	1	1.3	76	52.8	0.052
Yes	47	69.1	19	27.9	2	2.9	68	47.2	
Comorbidities									
No	29	90.6	3	9.4	0	0.0	32	22.2	0.021
Yes	81	72.3	28	25.0	3	2.7	112	77.8	
Length of retirement (years)									
2-5	19	73.1	7	26.9	0	0.0	26	18.1	0.707
> 6	80	76.2	23	21.9	2	1.9	105	72.9	
< 1	11	84.6	1	7.7	1	7.7	13	9.0	
Perceived health									
Poor	1	50.0	1	50.0	0	0.0	2	1.4	<0.001
Fair	13	40.6	17	53.1	2	6.2	32	22.2	
Good	65	85.5	10	13.2	1	1.3	76	52.8	
Excellent	31	91.2	3	8.8	0	0.0	34	23.6	

Source: Authors, 2025. N= Sample size, AF: Absolute Frequency, RF (%): Relative Frequency (percentage), *p*-value= Level of statistical significance ($p < 0.05$), MW: minimum wage.

Table 2. Regression analysis of loneliness versus depression (N=144). Itajubá, Minas Gerais state, 2025.

Predictor	No depression		Mild/moderate depression		Severe depression		Total	<i>p</i> -value	
	AF	RF (%)	AF	RF (%)	AF	RF (%)	AF	RF (%)	
Loneliness scale									
Minimal loneliness	103	85.1	17	14.0	1	0.8	121	84.0	<0.001
Mild loneliness	5	33.3	9	60.0	1	6.7	15	10.4	
Moderate loneliness	2	25.0	5	62.5	1	12.5	8	5.6	

Source: Authors, 2025. N= Sample size, AF: Absolute Frequency, RF (%): Relative Frequency (percentage), *p*-value= Level of statistical significance ($p < 0.05$).

Table 3. Regression analysis of social support network domains versus depression (N=144). Itajubá, Minas Gerais state, 2025.

Predictor	No depression		Mild/moderate depression		Severe depression		Total	<i>p</i> -value	
	AF	RF (%)	AF	RF (%)	AF	RF (%)	AF	RF (%)	
Emotional/informational support									
Perceived low	5	71.4	1	14.3	1	14.3	7	4.9	0.003
Perceived medium	23	57.5	15	37.5	2	5.0	40	27.8	
Perceived high	82	84.5	15	15.5	0	0.0	97	67.4	
Material support									
Perceived low	10	47.1	2	41.2	0	11.8	12	8.3	0.06
Perceived medium	23	80.3	12	18.9	2	0.8	37	25.7	
Perceived high	77	81.1	17	17.9	1	1.1	95	66	
Affective support									
Perceived low	3	42.9	4	57.1	0	0	7	4.9	<0.002
Perceived medium	32	69.6	11	23.9	3	6.5	46	31.9	
Perceived high	75	82.4	16	17.6	0	0	91	63.2	
Social interaction support									
Perceived low	4	57.1	3	42.9	0	0.0	7	4.9	<0.001
Perceived medium	15	50.0	12	40.0	3	10.0	30	20.8	
Perceived high	91	85.0	16	15.0	0	0.0	107	74.3	

Source: Authors, 2025. N= Sample size, AF: Absolute Frequency, RF (%): Relative Frequency (percentage), *p*-value= Level of statistical significance ($p < 0.05$).

Table 4. Odds Ratio analysis, significant predictors for depression (N=144). Itajubá, Minas Gerais state, 2025.

Predictor	cat_A	cat_B	Odds (A/B)	Lower bound	Upper bound
Marital status	Divorced	Single	0.50	0.06	4.12
	Divorced		1.96	0.22	17.69
	Single	Widowed	3.93	0.47	32.88
Perceived health	Fair	Fair	-	-	-
	Fair	Excellent	7.22	5.51	59.13
	Poor	Excellent	-	-	-
Monthly income	> 3 MW	< 1 MW	0.68	0.01	48.99
Affective support	Perceived low	Perceived low	2.17	0.09	19.36
Emotional/informational support	Perceived low	Perceived medium	0.38	0.01	17.78
Loneliness scale	Moderate loneliness	Minimal loneliness	11.41	0.69	187.90

Source: Authors, 2025. cat-A: category A (reference for comparison); cat-B: category compared to category A, Odds (A/B): odds ratio between categories, lower bound: confidence interval lower limit (95%), Upper bound: confidence interval upper limit (95%). MW: minimum wage.

Table 5. Multivariate regression analysis, significant predictors versus depression (N=144). Itajubá, Minas Gerais state, 2025.

Predictor	Regression coefficient (β)	Confidence interval		<i>p</i> -value	Chi ²	Cramer's V
		Lower	Upper			
Monthly income (MW)						
1-2 MW	-	-	-	0.022	7.611	0.077
> 3 MW	1.60	-0.54	3.73			
< 1 MW	7.11	2.06	12.16			
Marital status						
Married	-	-	-	0.041	8.246	0.191
Divorced	0.5	-1.89	2.89			
Single	3.10	0.72	5.47			
Widowed	-1.12	-3.58	1.35			
Perceived health						
Good	-	-	-	0.009	11.662	0.465
Fair	3.96	1.54	6.38			
Poor	25.80	*	*			
Excellent	-1.41	-4.26	1.43			
Loneliness scale						
Minimal loneliness	-4.78	-7.93	-1.64	0.001	13.213	0.473
Mild loneliness	-	-	-			
Moderate loneliness	3.62	-0.54	7.78			
Emotional/ informational support						
Perceived low	-9.33	-15.81	-2.84	0.018	8.067	0.284
Perceived medium	-1.54	-3.86	0.78			
Perceived high	-	-	-			
Affective support						
Perceived low	3.87	0.14	7.59	0.047	7.38	0.194
Perceived medium	0.65	-1.35	2.65			
Perceived high	-	-	-			

Source: Authors, 2025. (β): Regression coefficient, *p*-value: Level of statistical significance ($p < 0.05$); Chi²: chi-square test statistic; Cramer's V: measure of association strength, MW: minimum wage.

DISCUSSION

The aim of this study was to determine whether loneliness and social support network characteristics are associated with the presence of depressive symptoms in retired older adults. The results confirm this initial hypothesis, showing that mild-to-moderate levels of loneliness, low emotional, affective and positive social interaction support, as well as the presence of comorbidities, negative perceived health and income below the minimum wage, exhibited a significant association with depressive symptoms. These findings reinforce the importance of construing aging not only as a biological process, but also as a social and relational phenomenon, marked by the quality of bonds with others and living conditions.

The relationship between loneliness and depression identified in this study corroborates robust evidence from the literature, showing that older adults who experience chronic loneliness tend to have a higher probability of developing mental disorders and physical conditions, such as hypertension and cardiovascular diseases¹⁸. Loneliness negatively impacts emotional health, reduces psychological resilience, and interferes with the maintenance of brain activity, as the absence of emotional support and low social interactions deprive the individual of essential relational stimuli. This scenario renders older adults more vulnerable to stress and adverse psychological outcomes, including depression¹⁸. In studies involving similar samples, higher levels of loneliness correlated with greater presence of depressive symptoms and lower perceived social support¹³. These previous results are consistent with the findings of the present investigation, showing that loneliness is a central variable in understanding emotional distress in retired older adults.

Broader scientific evidence on the topic reveals a consistent association of loneliness and social withdrawal with depressive symptoms in older adults¹⁹. In general, the more intense the feelings of isolation and lower the affective support network, the greater the incidence of depressive disorders. This relationship pervades different sociocultural contexts, indicating that human interaction, affection,

and belonging are universal needs, whose deprivation contributes to psychological illness.

In the national scenario, a study conducted at a specialist clinic for older adults in São Paulo showed that users with high perceived emotional support and positive social interaction had higher levels of psychological well-being, while those reporting low support exhibited a higher rate of depressive symptoms²⁰. This data directly converges with the results of this study, reinforcing the protective role of social support in aging.

In a complementary manner, during the COVID-19 pandemic, the American study "All of Us Research Program", involving over 69,000 adults, found that high levels of emotional support and positive social interaction were associated with lower levels of depressive symptoms²¹. The methodological consistency of these studies reinforces that, even under adverse conditions, social support has an attenuating effect on psychological distress.

In studies conducted in other countries, such as Jordan (Middle East), a negative correlation was found between affective support and depression among institutionalized older adults, demonstrating that the absence of affective support exacerbates emotional distress²². Similar findings show that emotional support has a robust protective effect against depression²¹ and that psychosocial interventions focused on strengthening support networks can significantly reduce depressive symptoms in older adults²³.

Furthermore, longitudinal studies show that a greater number of confidants and the availability of practical help are associated with lower depressive symptoms, a relationship mediated by decreased loneliness²⁴. This evidence supports the "buffering" theoretical model, according to which social support networks act as a psychological buffer that reduces the impact of stress through emotional protection, instrumental support, and strengthening of interpersonal bonds²⁵.

The humanistic perspective of psychiatrist Nise da Silveira offers an important conceptual contribution to understanding the findings of this

study. Contrary to the coercive and exclusionary practices of traditional psychiatry, Nise defends the centrality of affection, creativity, and human bonding as fundamental therapeutic elements²⁶. In her experiences at Pedro II Hospital and the Museum of Images of the Unconscious²⁷, she showed that affective coexistence, symbolic expression, and engagement in creative activities favor social reintegration and emotional balance of people affected by psychological distress^{27,28}. Thus, her vision converges with the results of this study by confirming that affection, human contact, and feelings of belonging are essential elements in preserving mental health²⁷, especially in periods marked by changes in identity and reorganization of daily life, as occurs with retirement.

In addition to loneliness and support network, this study found that other factors were significantly associated with depression, such as the presence of comorbidities. In a study of 22,728 Brazilian older adults, 11.8% had depressive symptoms and 8.46% multiple chronic diseases, and individuals with multimorbidities had up to double the risk of developing depression²⁹. The authors also found that older adults with more restricted support networks and less involvement in community activities exhibited higher rates of depression. These results reaffirm that physical health and mental health are interdependent dimensions, especially in aging.

Another relevant aspect concerns perceived health. Studies show that older adults who rate their health as poor or very poor have a significantly higher risk of developing depressive symptoms³⁰. A study of 185 older adults found that participants with negative perceived health had up to ten times greater chance of presenting depressive symptoms compared to those with positive perceived health³⁰. Thus, the present study confirms this association, demonstrating that the way older adults perceive their health plays a determining role in the subjective experience of emotional well-being.

Socioeconomic status also stood out as a factor associated with depression. Older adults whose income was below the minimum wage had a higher rate of depressive symptoms, a relationship widely documented in the literature. In a study involving

133 older adults, 32.4% lived on insufficient income, a situation associated with a higher rate of depressive symptoms²⁰. Similar results were found in the SABE Study, which showed that older adults whose income was insufficient to meet daily needs had a higher prevalence of depression²⁰. Additionally, single marital status proved to be a factor associated with depression: among female older adults residing in rural areas of Mato Grosso do Sul state, 23.29% had depressive symptoms, especially among those who were single and had negative perceived health³¹.

These findings align with the DSM-5 guidelines, which characterize depression as a multifactorial disorder, involving psychological, biological, genetic, and environmental aspects²⁴. In the older population, depression has a major impact, being associated with a higher risk of disability, worsening chronic diseases, suicide, and mortality. Leisure resulting from retirement can negatively impact the social and emotional structure of older adults, reducing significant interactions and weakening support networks. In this sense, the social support network constitutes a central space of emotional support, representing the interface between the individual and society³². Such networks directly influence how older adults perceive their world, face adversities, and establish relationships, being potentiated by family, community, and affective bonds. These bonds, when strengthened, act as protective elements against the vulnerabilities inherent to the aging process.

This study has some limitations that should be noted. The cross-sectional design precludes any causal inference between the analyzed variables and limits the study to identifying associations. The use of self-report instruments may have introduced bias regarding individual perceptions, while the sample of retired older adults from a specific geographic context restricts the generalization of the study results. Future studies should adopt longitudinal designs and more diversified samples to further understanding on the role of loneliness, support networks, and perceived health in the development of depressive symptoms among retired older adults. Investigations should also explore community interventions, coexistence programs, and psychological strategies that promote social integration, affective strengthening, and positive perceived health.

CONCLUSION

The present study provides consistent evidence that the main factors associated with depression in retired older adults are mild-to-moderate loneliness, and low emotional, affective, and positive social interaction support. Furthermore, the presence of comorbidities, negative perceived health, monthly income below the minimum wage, and single marital status were found to increase vulnerability to depressive symptoms. This study is innovative in so far as it integrates both psychosocial and socioeconomic dimensions in elucidating emotional illness during retirement, a period marked by changes in identity and social bonds. The results underscore the role of interdisciplinary strategies for promoting mental health, especially through strengthening support networks and affective relationships, fundamental elements for preventing depression and enhancing quality of life in late adulthood.

AUTHOR CONTRIBUTIONS

- Miriam de Lima Mohallem – Conceptualization; study design; data analysis and interpretation; writing – original draft.
- Julia Brandão Vaz Cipriano – Conceptualization; study design; data analysis and interpretation; writing – original draft.
- Deruchette Danire Henriques Magalhães – Data analysis and interpretation; writing – review and editing; approval of the version to be published; responsibility for all aspects of the work.
- Rogério Donizeti Reis – Conceptualization; study design; data analysis and interpretation; data curation; writing – first review; writing – review and editing; final approval of the version to be published; responsibility for all aspects of the work.

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