



Original article

Correlation between depression and loneliness in the elderly individuals from Nextlalpan

Asociación entre la depresión y la soledad en el adulto mayor de Nextlalpan

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Resumen

Introducción: La depresión es un padecimiento caracterizado por la presencia de la tristeza, pérdida del interés o placer, sentimientos de culpa o falta de autoestima, trastornos del sueño o del apetito, así como la sensación de cansancio y la falta de concentración. La soledad es un sentimiento que se genera cuando un individuo se siente incomprendido o rechazado, o cuando carece de compañía para llevar a cabo aquellas actividades que desea, sean físicas, intelectuales o emocionales.

Objetivo: Asociar el nivel de depresión y soledad en el adulto mayor de Nextlalpan.

Metodología: Investigación cuantitativa, correlacional, prolectiva y transversal; el muestreo fue no probabilístico por conveniencia. El instrumento empleado fue Geriatric Depression Scale de Yesavage para tamizaje de depresión.

Resultados: Se encontró que el 76.8 % de adultos mayores presentaron depresión leve; el 9.2 %, depresión moderada; y el 14.0 %, depresión severa.

Discusión: Al realizar la correlación entre las variables depresión y soledad no se encontró un vínculo importante, sin embargo, se mantiene relación entre otras variables como depresión y edad, y soledad y género.

Conclusión: El personal de enfermería debe identificar el conflicto que genera la depresión y la soledad, desarrollar intervenciones que contribuyan al decrecimiento de los niveles de depresión y soledad de los adultos mayores, y mejorar la calidad de vida de estos.

Palabras clave: envejecimiento, soledad, depresión.

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Abstract

Introduction: Depression is a condition defined by persistent sadness, diminished interest or enjoyment, feelings of guilt or low self-esteem, sleep or appetite disturbances, as well as a pervasive sense of fatigue and difficulty concentrating. Loneliness arises when an individual feels misunderstood or excluded, or lacks companionship to engage in desired activities, whether physical, intellectual, or emotional.

Objective: To examine the relationship between the degree of depression and loneliness in elderly individuals from Nextlalpan.

Methodology: This study employs a quantitative, correlational, prospective, and cross-sectional approach. The sampling method was non-probabilistic and based on convenience. The instrument used for depression screening was the Geriatric Depression Scale developed by Yesavage.

Results: The findings indicate that 76.8% of elderly individuals exhibited mild depression, 9.2% experienced moderate depression, and 14.0% suffered from severe depression.

Discussion: The correlation analysis between depression and loneliness did not reveal a significant association. However, relationships were observed between other variables, such as depression and age, as well as loneliness and gender.

Conclusion: Nursing professionals must recognize the underlying factors contributing to depression and loneliness, implement interventions that help reduce their prevalence among elderly individuals, and enhance their overall quality of life.

Keywords: Aging, loneliness, depression.

Introducción

Aging has become an increasingly prominent phenomenon in our society. It is essential to recognize its significance, as elderly individuals are among the most vulnerable and socially marginalized groups.¹

Depression is a disorder associated with decreased serotonin levels — a neurotransmitter responsible for regulating well-being-related emotions and sleep. This imbalance leads to changes in energy levels, manifesting as a range of disruptions characterized by persistent sadness and diminished motivation.²

Depression is characterized by persistent sadness, diminished interest or enjoyment,

feelings of guilt or low self-esteem, sleep or appetite disturbances, as well as a pervasive sense of fatigue and difficulty concentrating. It results from intricate interactions among social, psychological, and biological factors. Individuals who have faced adverse life circumstances, such as unemployment, bereavement, or traumatic events, may experience heightened stress and dysfunction, further worsening their overall condition.³

Loneliness is an emotional state that arises when an individual feels misunderstood or excluded, or when lacking companionship to engage in desired activities, whether physical, intellectual, or emotional.⁴

According to De Jong Gierveld, individuals experience loneliness when they perceive deficiencies in certain relationships. The feeling of loneliness differs from the experience of “*being alone*”, as the latter refers to a state of social isolation involving a voluntary withdrawal from one’s social network, whereas loneliness is involuntary and closely linked to deficits in the perceived quality of social interactions. Social isolation is defined as an objective state in which contact with others is minimal, while loneliness represents a subjective condition characterized by a lack of desired affection and closeness.⁵

Although sociodemographic variables do not typically exert as strong an influence on loneliness as other factors, extensive evidence supports their role in identifying individuals who may be more susceptible to this emotional state. A review of various studies investigating the risk and protective factors associated with loneliness reveals that sociodemographic characteristics often function collectively, either amplifying or mitigating the likelihood of loneliness among older adults.⁶

This research is based on Callista Roy’s adaptation model, which emphasizes positive responses to environmental changes.⁷ The model categorizes stimuli into three types: focal, contextual, and residual, followed by a coping process within four adaptive modes—physiological function, role performance, self-concept, and interdependence—where the primary goal is to achieve adaptation.^{8,9}

The aim of this study is to examine the relationship between depression and loneliness levels in elderly individuals from Nextlalpan.

Methodology

A quantitative methodology with a correlational, prospective, and cross-sectional scope was employed. The sampling method was non-probabilistic and based on convenience, targeting elderly individuals from the State of Mexico, in Nextlalpan. A total of 120 participants were selected, consisting of 99 women and 21 men, aged 60 to 85 years, who were recruited from the health center and the elderly care home between July and December 2022.

The study was approved by the Research Ethics Committee of the Escuela Superior de Tlahuelilpan at the Universidad Autónoma del Estado de Hidalgo. Additionally, all participants provided informed consent.

For data collection, the Geriatric Depression Scale, developed by Yesavage and Brink in 1982, was utilized. This assessment consists of 30 items designed to measure the presence of depressive symptoms through direct questions; 20 of these assess symptom presence, while 10 are considered inverse items. The scale follows a dichotomous format, where respondents answer “*yes*” or “*no*”. Scores range from 0 to 30, with higher values indicating an increased risk of depression, exhibiting a Cronbach’s alpha reliability between 0.80 and 0.95.⁹

Another instrument utilized in this study was the ESTE-II Scale, designed to assess social loneliness. Developed in 1999 by Rubio and Aleixandre, it is derived from the ESTE-I Scale, which was created through a collaborative project involving the University of Granada, the Quality of Life and Aging Office, and IMSERSO (Institute for Older Adults and Social Services) in Spain. The scale consists of 15 items with three response options: always, sometimes, and never. It is divided into three factors:

- **Factor 1:** Perceived social support
- **Factor 2:** Use of new technologies by older adults
- **Factor 3:** Social participation index

Scoring levels are classified as low (0 to 10 points), medium (11 to 20 points), and high (21 to 30 points).¹⁰ The scale demonstrates strong reliability, with a Cronbach's alpha of 0.909.

For statistical analysis, a comparative correlation was performed. The Pearson correlation test was employed to assess the statistical relationship between two continuous variables. The correlation coefficient ranges from +1 to -1, where 0 indicates no association between the variables. A positive correlation (greater than 0) suggests that as one variable increases, the other also increases. Conversely, a negative correlation (less than 0) implies that as one variable rises, the other decreases.¹¹

Results

The following sociodemographic variables were analyzed. Age distribution revealed that the predominant group fell within the 60–65 years range (35 women and 7 men), comprising 35% ($f = 42$) of the sample. The next most common age group was 66–70 years (26 women and 9 men), representing 29.2% ($f = 35$), followed by individuals aged 71–75 years (17 women and 2 men), making up 19% ($f = 15.8$) (Table 1).

Table 1. Age distribution

<i>Variable</i>	<i>f</i>	<i>%</i>
60-65 years	42	35.0
66-70 years	35	29.2
71-75 years	19	15.8
76-80 years	12	10.0
Over 80 years	12	10.0
Total	120	100

Source: Sociodemographic Variables (Díaz, 2022) $n = 120$

Regarding gender distribution, 82.5% were women ($f = 99$), while 17.5% were men ($f = 21$) (Table 2).

Table 2. Gender distribution

<i>Variable</i>	<i>f</i>	<i>%</i>
Male	21	17.5
Female	99	82.5
Total	120	100

Source: Sociodemographic Variables (Díaz, 2022) $n = 120$

According to the findings obtained using the Geriatric Depression Scale, 76.8% of elderly individuals ($f = 92$) exhibited mild depression, while 14% ($f = 17$) suffered from severe depression, and 9.2% ($f = 11$) experienced moderate depression (Table 3).

Table 3. Depression levels

<i>Variable</i>	<i>f</i>	<i>%</i>
Mild	92	76.8
Moderate	11	9.2
Severe	17	14.0
Total	120	100

Source: Geriatric Depression Scale by Yesavage (Díaz, 2022), $n = 120$

According to the ESTE-II scale, 75.8% ($n = 91$) exhibited a low level of loneliness, while 20.9% ($n = 25$) experienced a moderate level, and 3.3% ($n = 4$) reported a high level of loneliness (Table 4).

Table 4. Loneliness levels

<i>Variable</i>	<i>f</i>	<i>%</i>
Low	91	75.8
Moderate	25	20.9
High	4	3.3
Total	120	100

Source: ESTE-II Loneliness Measurement Scale (Díaz, 2022), $n = 120$

In the correlation matrix, the p-values indicate statistical significance, with notable relationships observed between depression and age, as well as loneliness and gender. Meanwhile, the correlation between depression and loneliness

yielded a p -value of .000, indicating no significant association between these variables (Table 5).

Table 5. Pearson correlation matrix of depression, loneliness, age, gender, and occupation

<i>Variable</i>		<i>Depression</i>	<i>Loneliness</i>	<i>Age</i>	<i>Gender</i>	<i>Occupation</i>
Depression	Pearson correlation	1	.606	-.017	.102	.129
	p -value		.000	.851	.266	.160
Loneliness	Pearson correlation	.606	1	-.034	-.016	.108
	p -value	.000		.715	.867	.240
Age	Pearson correlation	.017	.034	1	.041	.020
	p -value	.851	.715		.653	.832
Gender	Pearson correlation	.102	.016	.041	1	.239
	p -value	.266	.867	.653		.009
Occupation	Pearson correlation	.129	.108	.020	.239	1
	p -value	.160	.240	.832	.009	

Source: Pearson Correlation Analysis (Díaz, 2022), $n = 120$

According to the results, there is no significant association between depression and loneliness, as the correlation yielded $p = .000$. However, these variables show significant relationships with other factors, such as depression with age ($p = .851$) and loneliness with gender ($p = .867$).

Furthermore, according to Callista Roy's Adaptation Model, the affected adaptive modes include the physiological mode, associated with the aging process, and the self-concept mode, which pertains to group identity, depression, and loneliness.¹²

Discussion

Hernández-Gómez *et al.*, in their study "*Loneliness and Aging*", mention that the feeling of loneliness is more prevalent among women and is associated with marital status. Similarly, the present research concluded that there is a strong correlation with the female gender ($p = .867$).

Additionally, their study also found a statistically significant association in the bivariate analysis between feelings of loneliness

and depression ($p < 0.0001$), highlighting a tendency to conceal loneliness behind depressive symptoms, without recognizing it as a social risk that extends beyond the disease itself. However, in this investigation, no relationship was identified between these two variables, yielding a p -value of .000.¹³

Granados-Ramos *et al.*, in their study "*Influence of Psychosocial Factors on Depression and Anxiety: Toward Healthy Aging*", found that 52% of participants had normal scores, while 34% experienced mild depression, 11% moderate depression, and 3% severe depression.

These results differ from the findings in the present research, where 76.8% exhibited mild depression, 9.2% moderate depression, and 14% severe depression. The discrepancies may be attributed to loss of vitality, changes in daily routines, and a decline in physical and cognitive functions.¹⁴

Llibre-Rodríguez *et al.*, in their study "*Loneliness and Its Association with Depression, Anxiety, and Sleep Disorders Among Elderly Cubans During the COVID-19 Pandemic*", reported that the average age was 75 years, while the most

frequently observed age range in the analysis was 60–65 years.¹⁵

Valarezo-Carreón *et al.*, in their article “*Influence of Loneliness on Cognitive and Emotional Well-Being in Elderly Individuals Residing in a Geriatric Institution*”, utilized the Geriatric Depression Scale by Yesavage to determine the presence and severity of depression in their sample population.

The study found that 45% of the population exhibited established depression, followed by 40% with mild depression and 15% showing no signs of depression.

In contrast, the present study revealed that 76.8% experienced mild depression, while 14% had severe depression. However, it is important to note that Valarezo-Carreón *et al.*'s study had a larger sample size ($n = 35$).¹⁶

Conclusion

Nursing professionals must identify the challenges posed by depression and loneliness, taking appropriate action to develop interventions that help reduce their prevalence among older adults. These efforts are crucial in enhancing overall quality of life and promoting well-being.

Likewise, it is essential to implement interventions that challenge negative perceptions of aging in society, as well as to strengthen support networks within families, friendships, neighbors, community groups, and other social circles. These efforts can significantly help reduce levels of depression and loneliness among older adults.

Any model designed to support this population and address issues related to loneliness, depression, and quality of life must incorporate the variables described in this study

when developing intervention strategies.

Depression and loneliness are pressing contemporary issues, often interconnected with other variables such as anxiety. Their association heightens the risk of these symptoms progressing toward the diagnosis of related mental disorders.

Prevalence data across all age groups, particularly among older adults, along with the range of associated challenges, highlight the need to prioritize these factors and develop effective interventions. This is especially crucial in contexts where loneliness and depression are visibly present.

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