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RESEARCH ARTICLE

Prevalence of depression, anxiety, and stress in Peruvian adults and older adults

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ABSTRACT

Depression, anxiety, and stress are prevalent emotional problems that affect mental health and quality of life, with differentiated impacts according to sociodemographic variables. Objective. The prevalence of depression, anxiety and stress in Peruvian adults and older adults was analyzed, comparing the differences between groups according to sociodemographic variables. Method. A non-experimental, quantitative and cross-sectional design was used, with a standardized questionnaire applied to a sample of 1483 Peruvian adults and older adults intentionally selected during the first quarter of 2025. Results. Most participants had high and medium levels of depression (28.7%), anxiety (30.8%) and stress (21.4%). Significant differences were found according to sociodemographic variables. Women and single people scored higher, while participants with completed higher education and higher incomes had lower levels of emotional distress. Conclusion: The prevalence of depression, anxiety, and stress among Peruvian adults and older adults is worrying, which highlights the need to strengthen mental health services through the creation of specialized centers and psychosocial programs with a differentiated approach, which consider sociodemographic characteristics.

Keywords: Prevalence; depression; anxiety, stress; mental health; sociodemographic variables

1. Introduction

Mental health in Peru is currently a major public health problem, national reports show a significant percentage of the population that presents symptoms of depression, anxiety and stress, affecting their general well-being and quality of life [1]. However, a gap persists between the high prevalence of these disorders and the limited coverage of psychological and psychiatric care in community settings.

Moreover, the prevalence of mental illnesses worsened during the presence of Covid-19, with depression (25.22%) and anxiety (34.15%) and stress increasing by more than 13.81% [2], aspects that have continued due to the relationship with work overload, family problems, low social support and chronic diseases. And in older adults, on average, 14% of this group lives with a mental disorder, with the most frequent conditions being depression and anxiety, situations that are related to loneliness, moral and material abandonment, emotional losses, physical deterioration, low sense of life, and reduced income [3].

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At the same time, these data show that depression, anxiety and stress are cross-cutting problems in Peruvian society, with a greater impact on adolescents and young people, but also present in adults and older adults; Despite its high prevalence, access to mental health services is limited, affected people do not receive timely treatment [4]. This reproduces a cycle of emotional deterioration, poor work performance, family problems and risk of suicide [5], especially in vulnerable populations.

From another perspective of social psychology, knowing the prevalence of depression, anxiety and stress in the population not only allows us to measure the magnitude of these problems, but also to understand how they are constructed, maintained or aggravated in specific social contexts, therefore, social psychology emphasizes that mental health is not an individual phenomenon, but a process determined by social interactions, cultural norms, economic structures and power relations [6].

In addition, social psychology highlights that disorders originate and remain in societies, allowing their frequency to be measured, identifying vulnerable groups, designing effective community interventions and reducing the stigma associated with mental health, as well as providing useful information to design public policies that promote well-being and social justice, especially addressing the social conditions that generate them [7].

The theoretical foundation points out from social theory [8], that the support of family, friends and community helps to protect people from problems such as stress, anxiety and depression, the presence of social support acts as a support in difficult situations, providing emotional help, advice and resources to face problems, It is differentiated that these situations occur in adults due to the multiple roles (work, partner, raising children, caring for elderly parents), and in older adults, it is distinguished by loneliness and abandonment of the family, retirement, widowhood or loss of friends.

Likewise, the theory of social stress [9] explains that stress, anxiety and depression do not only depend on the person, but are caused by social factors such as poverty, violence, unemployment and discrimination, therefore, people constantly exposed to these situations of social tension tend to accumulate emotional exhaustion. increasing their risk of suffering from depressive and anxiety disorders, in addition to high levels of stress, although social stress remains in both groups, its origin and manifestation differ according to life stage. In this sense, stress in adults comes from overload of roles and finances, while in older adults it is caused by health problems, dependency and age discrimination.

Analyzing sociodemographic variables such as age, sex, marital status, educational level, income is essential to understand depression, anxiety and stress, since these problems not only depend on individual factors, but also on these social conditions, characterizing that from adulthood onwards work and family responsibilities can be predictors of these problems, in addition, women generally have higher levels of anxiety and depression due to social inequalities, and role overload; and single or widowed people present greater emotional risk because they lack close support; likewise, low educational level and job instability increase stress and psychological vulnerability; therefore, including these variables allows us to identify groups with a higher prevalence of emotional problems [9].

From the review of previous studies, some studies related to the variables and units of analysis were found, in this sense, Ponce-Torres et al. [10], studied 200 older adults and found that more than half (55.6%) had depression, being more frequent in people without education and without work. Similarly, Macas et al. [11], evaluated the relationship between mental health and family functionality in older adults, concluding that those with family problems had higher levels of depression, anxiety, and stress; in addition, Torres and Torres [12] confirmed that low schooling, unemployment, and lack of socio-family support increase the risk of depression in this group.

Although there are few Peruvian studies focused on adults, Saavedra et al. [13], showed that social and environmental conditions are strongly related to mental health problems, likewise, Martina et al. [14], found that 71.9% of adult patients with cardiometabolic diseases present depressive symptoms, being more frequent in women and people with other diseases.

However, the existence of studies on the study variables have focused more on adolescents and young people, evidencing a theoretical gap in adults and older adults, as well as the relationship with social variables, this situation limits the comprehensive understanding of mental health from a psychosocial approach, necessary to design contextualized and effective interventions.

Therefore, it was proposed to analyze the prevalence of depression, anxiety and stress in Peruvian adults and older adults, comparing the differences between the groups according to sociodemographic variables.

2. Method

2.1. Type of study

A quantitative, non-experimental and cross-sectional design was used; data collection was carried out during the first quarter of 2025.

2.2. Participants

A total of 1483 intentionally chosen people participated, considering adults (29 to 64 years old) and older adults (over 65 years old), literate people and those who do not have severe sensory problems.

To determine the sample size, the G Power program was used, considering the following statistical tests and their respective parameters: t test, F test; ANOVA, a priori, effect size (0.10), error (0.05), probability (0.95), maximum number of groups to compare 4 (four).

2.3. Instrument

The abbreviated version of the depression, anxiety, and stress scales (DASS-21) [15] was applied, validated for the Peruvian context by Aleman and Lazo [16]. Three-dimensional self-report scales assess the presence and intensity of affective states of depression, anxiety, and stress. Each item is answered according to the presence and intensity of each symptom in the last week on a Likert-type response scale from 0 to 3 points, ranging from 0 ("It does not describe anything that happened to me or felt during the week") to 3 ("Yes, this happened to me a lot, or almost always") the use of this type of assessment avoids central response bias, it is more efficient and easier to respond to and improves the differentiation of the severity of the results. This instrument has the advantage of being a self-report scale, brief, easy to administer and answer, being simple to interpret. Each scale has seven items, and its total score is calculated with the sum of the items that belong to that scale and varies between 0 and 21 points. The authors validated the original structure using confirmatory factor analysis in a Peruvian sample, finding a good fit to the data ($\chi^2(186)$ = 1163.392; CFI = .986; TLI = .985, RMSEA = .052; SRMR = .023); and the internal consistency presented values higher than .90 (Cronbach's Alpha and Omega) demonstrating high reliability.

2.4. Procedure

For the application of the instrument, the following steps were carried out: in the case of adults, each of them was contacted in different public spaces such as recreational, commercial and supply centers, likewise, the strategy of contacting the elderly in medical care and leisure centers was sought, the purpose of the study was explained, so they accepted and signed the informed consent.

The instrument was administered individually, with pencil and paper, and always with the presence of an applicator to resolve doubts or attend to any incident. Participation was voluntary and the absolute confidentiality of the responses was maintained.

2.5. Ethical considerations

The study was carried out with the ethical considerations of the Ministry of Health of Peru, where ethical guidelines for health research with human beings were developed according to Ministerial Resolution No. 233-2020-MINSA, published on April 27, 2020, which aims to promote health research in an ethical manner. In addition, the international ethical principles of the Declaration of Helsinki were considered important.

2.6. Data analysis

The surveys that were collected physically were digitized on the Excel platform. The database was then exported to the statistical program Jamovi, allowing the necessary statistical tests to be used. Then, normality was analyzed with the Shapiro Wilk test, resulting in the data not fitting a normal distribution, and nonparametric tests were used for inferential analyses [17]. For the comparison of two independent samples, the U of Man Whitney test was used; and for the comparison of k independent samples, the Kruskal Wallis test and the post hoc tests, with their respective effect sizes (biserial, small = 0.10, medium = 0.30 and large = 0.50; and epsilon-squared, small = 0.01, medium effect = 0.06 and large effect = 0.14).

3. Results

A database was developed considering sociodemographic variables such as sex, age, marital status, level of education, monthly income, and residence of the participant. From the analysis carried out, it can be stated that 1,483 people participated, with ages ranging from 29 to 93 years (M = 49.40 years, SD = 13.83 years), of which: 873 (58.87%) are women and 610 (41.13%) are men (Table 1).

Table 1. Description of the sociodemographic variables of the participants

Variable	***f***	***%***
Age (M= 49.40; SD= 13.83)		
Sex		
Women	873	58.87%
Men	610	41.13%
Population group		
Adult	952	64.19%
Older Adult	531	35.81%
Marital status		
Married	565	38.09%
Cohabitant	388	26.16%
Separated/Widowed	122	8.23%
Bachelor	408	27.52%
Level of education		
Primary	285	19.22%
High school	650	43.83%
Superior	548	36.95%

Variable	***f***	***%***
Monthly Income		
Less than S/. 1,030	791	53.34%
S/. 1,031 – S/. 3,000	472	31.83%
S/. 3,001 and more	220	14.83%
Residence		
Association	364	24.54%
Slum	298	20.09%
Residential	156	10.52%
Urbanization	665	44.85%

Table 1. (*Continued*)

Table 2. Presents the prevalence of depression, anxiety and stress, and shows that most of those evaluated are at high and medium levels in the three variables, indicating that these emotional problems are highly prevalent in the adult and elderly population. Highlighting the need to prioritize their care as part of public health and comprehensive psychosocial interventions.

Table 2. Prevalence of depression, anxiety, and stress

Levels	**Depression f (%)**	**Anxiety f (%)**	**Stress f (%)**
Very low	167 (11.3%)	141 (9.5%)	276 (18.6%)
Low	166 (11.2%)	145 (9.8%)	280 (18.9%)
Middle	367 (24.7%)	405 (27.3%)	303 (20.4%)
High	426 (28.7%)	457 (30.8%)	317 (21.4%)
Very high	357 (24.1%)	335 (22.6%)	307 (20.7%)

Statistically significant differences were found according to sex, population group, marital status, level of education, monthly income, and residence ($p<.05$). It was found that women had higher depression scores than men. As well as the elderly with adults. In addition, single people showed higher levels than the other groups. People with primary education had the highest scores. And participants who have incomes greater than S/.3,000 presented lower scores compared to the rest of the groups, as well as those who reside in residential areas (Table 3).

Table 3. Comparison of depression according to sociodemographic variables

Sociodemographic	**Category**	**M (DE)**	**p (sig.)**	**T.E.**
Sex	Man	7.12 (5.15)	< .001	0.10
	Woman	7.45 (5.29)		
Poblacional Group	Adult	7.64 (5.12)	.000	0.03
	Older adult	7.95 (4.68)		
Marital status	Married	6.23 (4.96)	< .001	0.007
	Cohabitant	7.30 (4.88)		
	Separated/Widowed	7.86 (4.99)		
	Bachelor	8.01 (5.36)		

Sociodemographic	Category	M (DE)	p (sig.)	T.E.
Level of education	Primary	8.15 (5.37)	< .001	0.006
	High school	7.90 (4.77)		
	Superior	7.32 (5.21)		
Monthly Income	Less than S/. 1,030	8.21 (5.29)	< .001	0.005
	S/. 1,031 – S/. 3,000	7.65 (5.30)		
	S/. 3,001 and more	5.84 (4.93)		
Residence	Association	8.14 (5.36)	< .001	0.009
	Slum	7.84 (4.95)		
	Residential	7.12 (5.18)		
	Urbanization	7.77 (5.16)		

Note. *p= significance <.05; T.E.= effect sizes; S/= Peruvian currency.*

Statistically significant differences (p< .05) were found in the anxiety variable according to sex, marital status, population group, level of education and monthly income. Women had higher scores compared to men; older adults are more anxious than adults; divorced people scored higher than the other groups; Participants with higher education showed lower scores compared to the other educational levels, and the group with higher incomes had lower scores compared to the other groups (Table 4).

Table 4. Comparison of anxiety according to sociodemographic variables

Variable	Category	M (DE)	p (sig.)	T.E.
Sex	Man	6.97 (5.06)	< .001	0.14
	Woman	8.21 (5.20)		
Population group	Adult	7.50 (5.22)	< .001	0.15
	Older adult	7.29 (4.44)		
Marital status	Married	7.12 (4.98)	< .001	0.009
	Cohabitant	7.61 (5.09)		
	Divorced/Widowed	8.09 (5.02)		
	Bachelor	7.86 (5.25)		
Level of education	Primary	8.04 (5.29)	< .001	0.013
	High school	7.93 (4.75)		
	Superior	7.09 (5.16)		
Monthly Income	Less than S/. 1,030	8.22 (5.30)	< .001	0.016
	S/. 1,031 – S/. 3,000	7.44 (5.30)		
	S/. 3,001 and more	5.74 (4.85)		
Residence	Association	7.74 (5.30)	0.083	0.001
	Slum	8.58 (5.91)		
	Residential	7.52 (4.86)		
	Urbanization	7.21 (5.08)		

Note. *p= significance <.05; T.E.= effect sizes; S/= Peruvian currency*

There is sufficient statistical evidence (p<.05) in the comparison of stress scores according to sex, population group, marital status, level of education and monthly income. Women had higher scores than men;

adults are more stressed than older adults; single people scored higher than the other groups; participants with higher education recorded lower scores compared to the other educational groups; and the group with the highest monthly income presented lower scores than the other comparison groups (Table 5).

Table 5. Comparison of stress according to sociodemographic variables

Variable	Category	M (DE)	p (sig.)	T.E.
Sex	Man	7.83 (4.68)	< .001	0.13
	Woman	8.98 (4.90)		
Age	Adult	8.10 (4.51)	< .001	0.09
	Older adult	8.09 (4.87)		
Marital status	Married	7.89 (4.69)	< .001	0.005
	Cohabitant	8.28 (4.78)		
	Divorced/Widowed	8.46 (4.90)		
	Bachelor	8.74 (4.98)		
Level of education	Primary	8.80 (4.91)	< .001	0.007
	High school	8.69 (4.64)		
	Superior	8.00 (4.44)		
Monthly Income	Less than S/. 1,030	8.51 (4.90)	<.001	0.018
	S/. 1,031 – S/. 3,000	7.53 (4.93)		
	S/. 3,001 and more	6.48 (5.08)		
Residence	Association	8.73 (4.85)	.221	0.002
	Slum	8.84 (5.12)		
	Residential	8.99 (4.81)		
	Urbanization	8.88 (4.73)		

Note. *p= significance <.05; T.E.= effect sizes; S/= Peruvian currency.*

4. Discussion

The study analyzed the prevalence of depression, anxiety and stress in Peruvian adults and older adults, considering the differences according to sociodemographic variables such as sex, age, marital status, educational level and economic income, likewise, the research sought to provide evidence to understand the distribution of these emotional problems in the population and their possible social determinants.

The results show that most of the participants presented high and medium levels of depression, anxiety, and stress, coinciding with previous studies that report high prevalences in older adults [10] [12]; and adults with chronic diseases [14]. This high frequency is interpreted from the theory of social stress [9], which states that adverse structural conditions, such as low schooling, unemployment, family problems or limited income, generate a cumulative impact on mental health.

Regarding sociodemographic differences, it was found that women have higher scores compared to men, explaining that the double burden of work and family responsibility, as well as cultural and gender factors, increase their emotional vulnerability [6].

In addition, single people had higher levels of depression, anxiety, and stress, probably due to the lower availability of close emotional support [6]. In terms of educational level, participants with completed higher education showed lower scores, coinciding with studies that associate higher education with greater access to resources, support networks, and coping strategies [9]. Finally, it was observed that people with higher economic incomes reported lower levels of emotional affectation, which can be explained by economic security and less exposure to daily stressors [18].

Although these differences were statistically significant, the effect sizes were small, indicating that there are differences between groups, but that they do not represent changes of great magnitude, understanding that emotional problems affect the population transversally [19].

Therefore, sociodemographic variables on the one hand determine the absence or presence of emotional problems, and on the other, they act as risk or protective factors, modulating the intensity and frequency of difficulties, in this sense, some risk situations arise due to sex, low education, low income and the absence of a partner. While others are presented as protectors, higher education, high income, and social support, determining the way in which people experience and cope with stressors, affecting life satisfaction [20].

The high prevalence observed is due to several reasons, emotional problems are a public health concern in these groups, not only because of their frequency, but also because of their implications for quality of life, family and social functioning and the increase in chronic physical diseases; In older adults, untreated depression is associated with greater cognitive and functional impairment, lower adherence to medical treatments, and increased mortality [21].

Too, the importance of estimating prevalence lies in the fact that it allows the identification of population groups with greater vulnerability, such as the elderly and their socioeconomic limitations [22], the information is crucial so that public policies and intervention programs can be designed specifically aimed at the most affected groups, increasing the effectiveness of prevention and mental health promotion strategies.

Likewise, the inclusion of samples of adults and older adults in mental health studies is essential, given that most research focuses on young people and adolescents, leaving aside these groups that face different life stressors, such as work overload, retirement, loneliness, widowhood, unemployment, sentimental breakup, and age discrimination, requiring differentiated interventions [23].

In summary, the study confirms that the prevalence of depression, anxiety and stress in adults and older adults is high, particularly affecting women, single people, with a lower level of education and low income. These results highlight the importance of implementing mental health interventions with a psychosocial approach, considering social determinants and promoting support networks, emotional education and community programs for vulnerable groups.

It´s concluded that the high prevalence of depression, anxiety, and stress among Peruvian adults and older adults, with differences according to sociodemographic variables, demonstrates the urgent need to strengthen mental health services through differentiated and accessible psychosocial programs aimed at prevention, early detection, and comprehensive care, as well as to promote longitudinal research that allows for a better understanding of these phenomena and the design of public policies sensitive to the social and cultural context.

During the research process, some limitations were presented, considering that some older adults due to age-related problems required personalized help, despite individual assistance they decided not to participate; In relation to the methodology, the cross-sectional design limits establishing causal relationships between the variables studied; the use of self-reports can generate social desirability biases or underreporting of

symptoms; and the sample was non-probabilistic, so the results cannot be generalized to the entire Peruvian population.

On the other hand, the directionality of research allows it to be a reference for future research, recommending the promotion of longitudinal research and with national representative samples to analyze the evolution of mental health and its determinants over time.

And it is suggested that local authorities implement care centers and community programs for the promotion of mental health, especially aimed at women, women with low educational levels, unemployed older adults, strengthening support networks and coping strategies. In addition, public policies aimed at reducing structural inequalities (education, employment, access to mental health services) should be promoted as indirect strategies for the prevention of emotional problems.

Conflict of Interest

The authors declare no conflict of interest.

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