# Is self-esteem associated with the elderly person's quality of life?

A autoestima está associada à qualidade de vida da pessoa idosa? ¿La autoestima está relacionada a la calidad de vida de la persona anciana?

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#### ARSTRACT

**Objective:** To analyze the association between self-esteem and quality of life in the elderly. Methods: Cross-sectional web survey developed with 519 elderly people. Participants filled out three data collection instruments developed on the Google Forms platform and widely disseminated through all of Brazil. Fisher's exact test, Mann-Whitney, Pearson correlation, and linear regression with 95% confidence interval were used. Results: Self-esteem was associated with all quality-of-life facets: sensory skills [ $\beta$ = 1.307; p<0.001]; autonomy [ $\beta$ = 2.101; p<0.001]; past, present, and future activities [ $\beta$ = 2.486; p<0.001]; social presence [ $\beta$ = 2.547; p<0.001]; death and dying [ $\beta$ = 2.175; p<0.001]; and intimacy [ $\beta$ =2.378; p<0.001]. Conclusion: There is a positive and statistically significant association between self-esteem and quality of life in the elderly. We therefore suggest the development of local policies capable of raising this age groups' self-esteem and reaffirming aging as a new possibility for discoveries and pleasure.

Descriptors: Mental Health; Elderly Health; Public Health; Geriatric Nursing; Holistic Nursing.

#### **RESUMO**

Objetivo: Analisar a associação entre autoestima e qualidade de vida de idosos. Métodos: Estudo seccional web survey desenvolvido com 519 idosos. Os participantes preencheram três instrumentos para a coleta dos dados organizados na plataforma Google Forms e amplamente divulgados para todo o Brasil. Utilizaram-se os testes Exato de Fisher, Mann-Whitney, correlação de Pearson e regressão linear com intervalo de confiança de 95%. Resultados: Autoestima esteve associada com todas as facetas da qualidade de vida: habilidades sensoriais [ $\beta$ = 1,307; p<0,001]; autonomia [ $\beta$ = 2,101; p<0,001]; atividades passadas, presentes e futuras [ $\beta$ = 2,486; p<0,001]; participação social [ $\beta$ = 2,547; p<0,001]; morte e morrer [ $\beta$ = 2,175; p<0,001]; e intimidade [β= 2,378; p<0,001]. **Conclusão:** Há associação positiva e estatisticamente significante entre autoestima e qualidade de vida de idosos. Sugerimos, portanto, o desenvolvimento de políticas locais capazes de elevar a autoestima desse grupo etário e reafirmar o envelhecimento como uma nova possibilidade de descobertas e prazer.

Descritores: Saúde Mental; Saúde do Idoso; Saúde Pública; Enfermagem Geriátrica; Enfermagem Holística.

#### **RESUMEN**

Objetivo: Analizar la relación entre autoestima y calidad de vida de ancianos. Método: Estudio seccional web survey desarrollado con 519 ancianos. Participantes rellenaron tres instrumentos para la recolecta de datos organizados en la plataforma Google Forms y ampliamente divulgados para todo Brasil. Utilizadas las pruebas Exacta de Fisher, Mann-Whitney, correlación de Pearson y regresión lineal con intervalo de confianza de 95%. Resultados: Autoestima estuvo relacionada con todas las facetas de la calidad de vida: habilidades sensoriales [ $\beta$ = 1,307; p<0,001]; autonomía [ $\beta$ = 2,101; p<0,001]; actividades pasadas, presentes y futuras [ $\beta$ = 2,486; p<0,001]; participación social [ $\beta$ = 2,547; p<0,001]; muerte y morir [ $\beta$ = 2,175; p<0,001]; e intimidad [ $\beta$ = 2,378; p<0,001]. **Conclusión:** Hay relación positiva y estadísticamente significante entre autoestima y calidad de vida de ancianos. Sugerimos, así, el desarrollo de políticas locales capaces de elevar la autoestima de ese grupo etario y reafirmar el envejecimiento como una nueva posibilidad de descubiertas y placer. Descriptores: Salud Mental; Salud del Anciano; Salud Pública; Enfermería Geriátrica; Enfermería Holística.

#### **INTRODUCTION**

In Brazil, an "elder" is a person aged 60 years or over (1). Currently, the country has a population of more than 28 million elderly people, which represents 13% of the population, according to data from the Instituto Brasileiro de Geografia e Estatística (IBGE) [Brazilian Institute of Geography and Statistics] (2). In addition, Brazilian estimates point to the possibility of having twice as many people over 60 years of age in the coming decades (2); and, by 2050, the World Health Organization states that, for every five people, one will be aged 60 years or over (3).

The aging process is an active, progressive, and intrinsic phenomenon, being accompanied by several physical and psychophysiological changes that can result in unsatisfactory repercussions on the adaptive capacity of the elderly to the environment in which they live<sup>(4)</sup> and, consequently, affect their self-esteem. In this sense, there are some factors intrinsic to aging that negatively influence self-esteem, such as the cessation of work<sup>(5)</sup>, significant loss of social roles, physiological limitations, physical changes, and loss of loved ones<sup>(6)</sup>.

Self-esteem can be understood as a personal assessment, involving thoughts and feelings that individuals have about themselves, considering their limits and expectations<sup>(6)</sup>. It is a construct that shows how much the individuals like themselves, how they see themselves, and what they think about themselves<sup>(4)</sup>, thus becoming a sense of self-worth and self-acceptance<sup>(5)</sup>. In addition, it is considered an important indicator of mental health, so there is a need for strategies that favor its increase considering the health of the elderly and the prevention of mental disorders<sup>(5)</sup>. This is because the positive self-assessment reflects good mental health and provides greater security and confidence to the elderly, which, in turn, contributes to an adjusted life<sup>(6)</sup>.

Therefore, this study was motivated by the scarcity of current investigations focusing on the analysis of the relationship between self-esteem and the elderly's quality of life (QoL) within the national and international scope<sup>(4,7)</sup>. Furthermore, considering that elderly people are more vulnerable to loss of self-esteem resulting from role changes and changes in interpersonal relationships<sup>(8)</sup>, that psychological dimensions are predictors of a better QoL, which can maximize successful aging<sup>(9)</sup>, and that self-esteem is an important aspect in coping with the aging process<sup>(9)</sup>, some authors confirm the importance of intensifying studies on this topic due to its high impact on the health system<sup>(7)</sup>.

Following this perspective, we developed this study aiming to fill the existing gap regarding the quantitative limitation of research in the area, as well as to continue the line of thought of some authors (4,7) who reported such gap. Also in this sense, given the growing elderly population, we must invest in methods that go beyond the biological aspects and begin to value the subjectivities and actions that promote the health and QoL of these elderly people, as increasing the number of days in life is not enough: guality should also be added to those additional years.

Our study considered the definition of QoL proposed by the World Health Organization (WHO), which defines it as "the individual's perception of their position in life, in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns"<sup>(10)</sup>. Therefore,

considering the impacts of the aging process and the need to promote quality to the years to come, the hypothesis of this study is that self-esteem is positively associated with the QoL of the elderly.

#### **OBJECTIVE**

To analyze the association between self-esteem and quality of life in the elderly.

#### **METHODS**

#### **Ethical aspects**

This study complied with all ethical and bioethical aspects regarding the development of research with human beings in accordance with Resolution No. 466/2012 of the National Health Council. The project was approved, in 2020, by the Research Ethics Committee (REC) of the Escola de Enfermagem de Ribeirão Preto - Universidade de São Paulo (EERP/USP) [Ribeirão Preto College of Nursing - University of São Paulo]. All participants read and agreed to the Free and Informed Consent Form (FICF), which was sent with a blind copy to all emails informed.

#### Study design, time and place

This study has a *web survey* type, sectional design, with a descriptive approach, built in accordance with the *Strengthening the Reporting of Observational Studies in Epidemiology* (STROBE) tool. The study scenario covered the five regions of Brazil (North, Northeast, Midwest, Southeast, and South). There were no face-to-face meetings between participants and researchers. Data collection was online and took place between July and October 2020; the elderly remained in their respective homes.

#### Sample; inclusion and exclusion criteria

The sample was selected using the consecutive non-probabilistic technique, being determined a priori with the following parameters:  $\alpha=0.05$  (5%), CI = 95% ( $z\alpha/2=1.96$ ), 50% conservative proportion, and adjustment for infinite population. With this, there was a need for at least 385 elderly people. However, foreseeing the possibility of losses and incompleteness of answers to the questionnaire, more than 30% (n=134) were added to the final calculation, which resulted in 519 participants.

They met all the inclusion criteria: people residing in any region of Brazil; aged 60 years or over; with internet access and an active Facebook account. Such criteria were controlled using Facebook's post boosting feature, through which you delimit the dissemination of the instruments only to the previously defined public.

The exclusion criteria were: elderly people residing in long-term and other similar institutions, those hospitalized during the collection period, with some degree of dependence for undertaking basic daily living activities, and those with any neurodegenerative comorbidity that compromised the understanding of the instruments. Such criteria were tracked through four dichotomous questions (yes/no) carried out in the initial stage of data collection,

questioning whether they fit any aforementioned characteristic. Elderly people who answered negatively to all questions were considered eligible.

Since the collection was online and considering the skills needed to handle electronic devices such as smartphones and/or laptops, in addition to the active interaction of the elderly in a social network, the application of instruments to assess cognitive conditions was dispensed with. We also emphasize that there was no way to ensure that the participants responded to the instruments without assistance.

#### Study protocol

Data collection took place between July and October 2020 through a social interaction page on Facebook, created exclusively for the development of scientific research on sexuality, health, and QoL, as well as for the dissemination of information related to these themes.

The authors published an invitation to participate which contained the study title, institution and responsible researchers, inclusion criteria, contact email, and a hyperlink that directed interested parties to the survey questionnaire developed on the Google Forms platform. This questionnaire was structured in five blocks: 1) study presentation, 2) free and informed consent form (FICF), 3) bio-sociodemographic data, 4) data on self-esteem and 5) data on QoL.

The first block contained information about the presentation and justification of the study, in addition to the inclusion criteria that should be met by the participants.

In the second block, the FICF, project approval number by the REC and contact information (telephone and email) were presented. After reading the consent form, the participants declared their acceptance to participate in the study through a mandatory question. Also in this second block, participants were required to include their email for the sending of a duplicate of the consent form and for data control, allowing the researchers to track and correct a possible multiplicity of responses by the same participant and, consequently, avoid bias, which did not occur in the present study.

The third block was structured with questions elaborated by the researchers themselves and aimed to know the bio-sociodemographic profile of the participants. It contained questions related to sex, age group, marital status, sexual orientation, religious belief, Brazilian region in which they live, education, ethnicity, and whether they lived with their children.

The fourth block included the Rosenberg Self-Esteem Scale, adapted and validated for the Brazilian population. It is organized into ten items with four Likert-type answer possibilities, ranging from 1 point (totally disagree) to 4 points (totally agree)<sup>(11)</sup>. A cutoff point was adopted: < 30 (poor self-esteem) and  $\geq$  30 (satisfactory self-esteem)<sup>(6)</sup>. In the present study, the scale showed good reliability, as evidenced by Cronbach's alpha of 0.854.

Finally, the fifth block was built with the World Health Organization Quality of Life – Old (WHOQOL-Old) instrument, adapted and validated for Brazilian elderly<sup>(12)</sup>. It consists of 24 questions distributed in six facets of assessment: sensory skills; autonomy; past, present, and future activities; social presence; death and

dying; and intimacy. Each question has five possible answers on a Likert-type scale ranging from 1 to 5 points. There is no cutoff point for WHOQOL-Old. Its total score varies between 24 and 100 points; and, the higher the final score, the better the interviewee's QoL<sup>(13)</sup>. It is noteworthy that, before the analysis, the recoding of the necessary items was performed.

In the present study, the WHOQOL-Old showed good reliability, with a Cronbach's alpha of 0.901. In the reliability analysis, the facets had the following results: sensory skills ( $\alpha = 0.795$ ); autonomy ( $\alpha = 0.701$ ); past, present, and future activities ( $\alpha = 0.761$ ); social presence ( $\alpha = 0.833$ ); death and dying ( $\alpha = 0.822$ ); and intimacy ( $\alpha = 0.888$ ).

The authors contracted the post boosting feature on a monthly basis. This is an option offered by Facebook that allows for increased engagement in the publication, expanding the possibility of the research being liked, commented on, and shared among users, in addition to making the questionnaire available throughout the Brazilian territory. In this way, we were able to achieve the required sample.

#### **Analysis of results and statistics**

Data were transported from Microsoft Excel to the IBM SPSS® statistical software (version 25) to be stored and analyzed. We considered a 95% confidence interval (p < 0.05) for all analyses. Quantitative variables were presented as median (Md) and interquartile range (IQ). Qualitative variables were expressed through absolute and relative frequencies.

Fisher's exact test was used to analyze the proportions of bio-sociodemographic variables and the two classifications of self-esteem (satisfactory and unsatisfactory). The Mann-Whitney U test was used to compare two independent groups with the QoL facets.

To analyze the relationship between the independent variable (self-esteem) and the dependent ones (QoL facets), the Pearson correlation (r) was used. Finally, the analyses that presented a p value < 0.2 were included in the linear regression model by the "insert" method, whose results were given through their respective  $\beta$  coefficients (standardized and non-standardized), standard error, 95% confidence interval (Cl 95%), coefficient of determination (R2), and p-value. The model's adequacy was attested by the Durbin-Watson test.

#### **RESULTS**

Among the 519 participants, there was a higher prevalence of elderly males (n = 354; 68.2%); aged between 60 and 64 years (n = 257; 49.5%); of the Catholic religion (n = 258; 49.7%); self-declared white (n = 340; 65.5%); with complete higher education (n = 196; 37.8%); married (n = 313; 60.3%); who live with their spouse for over 20 years (n = 293; 56.5%); heterosexuals (n = 445; 85.7%); who do not live with their children (n = 339; 65.3%); and reside in the Southeast region of the country (n = 239; 46.1%).

Also, most elderly people had satisfactory self-esteem (n = 388; 74.8%); and self-esteem was statistically associated with ethnicity (p = 0.034); education (p = 0.016); and sexual orientation (p = 0.001), according to Fisher's exact test (Table 1).

Table 1 – Comparison of the bio-sociodemographic variables with self-esteem, Ribeirão Preto, São Paulo, Brazil, 2020

Variables	Self-e Satisfactory n %		steem Unsatisfactory n %		<i>p</i> value	
Sex						
Male	265	74.9	89	25.1	0.939	
Female	123	74.5	42	25.5	0.555	
Marital Status	.25	,5		23.3		
Married	227	72.5	86	27.5		
Stable Union	83	76.9	25	23.1	0.318	
Fixed Partner	78	79.6	20	20.4	0.510	
Religion	, 0	7 7 10		2011		
Catholic	195	75.6	63	24.4		
Protestant	53	74.6	18	25.4		
Spiritist	54	77.1	16	22.9		
Of African origins	7	77.8	2	22.2	0.929	
No Religion	, 41	73.2	15	26.8		
Others	38	69.1	17	30.9		
Lives With Their Children						
Yes	120	76.9	36	23.1		
No	247	72.9	92	27.1	0.212	
Does not have children	21	87.5	3	12.5	V	
Ethnicity		07.15	J			
White	251	73.8	89	26.2		
Yellow	4	36.4	7	63.6		
Black	20	74.1	7	25.9		
Brown	104	80.6	25	19.4	0.034*	
Indian	1	50.0	1	50.0		
Does not know	8	80.0	2	20.0		
Brazilian Region			_			
North	30	75.0	10	25.0		
Northeast	61	79.2	16	20.8		
Midwest	44	71.0	18	29.0	0.388	
Southeast	184	71.0 77.0	55	23.0	3.300	
South	69	68.3	32	31.7		
Education						
Elementary School	63	65.3	33	34.7		
Middle School	24	60.0	16	40.0		
High School	143	76.9	43	23.1		
Higher Education	157	80.1	39	19.9		
No Education	1	100	0	0.0		
Sexual Orientation						
Heterosexual	344	77.3	101	22.7		
Homosexual	12	70.6	5	29.4		
Bisexual	3	30.0	7	70.0	0.001*	
Others	29	61.7	, 18	38.3		

<sup>\*</sup>Statistically significant differences for Fisher's exact test (p < 0.05).

Table 2 – Comparison of the Quality of Life facets with self-esteem, Ribeirão Preto, São Paulo, Brazil, 2020

	Self-				
QoL Facets	Satisfactory M <sub>d</sub> (IQ)	Unsatisfactory M <sub>d</sub> (IQ)	U	<i>p</i> value	
Sensory skills	81.25 (68.75-93.75)	68.75 (50.00-81.25)	16605.00	< 0.001*	
Autonomy	75.00 (62.50-81.25)	56.25 (43.75-68.75)	11607.00	< 0.001*	
Past, present, and future activities	68.75 (56.25-81.25)	50.00 (37.50-62.50)	10189.00	< 0.001*	
Social presence	71.87 (56.25-81.25)	50.00 (31.25-56.25)	11451.00	< 0.001*	
Death and dying	75.00 (50.00-87.50)	56.25 (37.50-75.00)	17327.50	< 0.001*	
Intimacy	75.00 (68.75-87.50)	56.25 (37.50-75.00)	11116.50	< 0.001*	
Overall quality of life	71.87 (62.50-80.20)	53.12 (46.87-61.45)	7779.00	< 0.001*	

<sup>\*</sup> Statistical significance for the Mann-Whitney U test (p < 0.05); QoL: Quality of Life.

Table 3 - Correlations between the facets of Quality of Life and self-esteem, Ribeirão Preto, São Paulo, Brazil, 2020

Quality of life facets	r	p value	
Sensory skills	0.350	< 0.001	
Autonomy	0.541	< 0.001	
Past, present, and future activities	0.612	< 0.001	
Social presence	0.564	< 0.001	
Death and dying	0.363	< 0.001	
Intimacy	0.580	< 0.001	
Overall quality of life	0.713	< 0.001	

<sup>\*</sup> Statistical significance for Pearson's correlation (p < 0.05).

The highest proportion of categories with unsatisfactory self-esteem was observed among elderly who self-declared yellow (63.6%), bisexual (70.0%), and with education up to middle school (40.0%). As for satisfactory self-esteem, the highest proportion was found among self-declared browns (80.6%), with higher education (80.1%), and heterosexuals (77.3%).

According to Table 2, it is observed that, regardless of the classification of self-esteem, the elderly showed better QoL in the Sensory Skills facet. Also, it is noted that elderly people with unsatisfactory self-esteem have the lowest QoL scores in all facets, with worse QoL when compared to elderly people with satisfactory self-esteem (p < 0.001).

Table 3 demonstrates that all facets of QoL were significantly correlated with self-esteem, presenting positive correlations of different magnitudes (p < 0.001).

The final analysis of linear regression showed that the self-esteem scale remained positively associated with all facets of QoL, thus indicating that an increase in self-esteem implies an increase in the elderly's QoL (p < 0.001), as shown in Table 4. In addition, the model was able to explain 50.8% of the relationship between self-esteem and general quality of life of the studied elderly.

#### **DISCUSSION**

We identified that most elderly people had a satisfactory self-esteem (n = 388; 74.8%), corroborating another similar investigation<sup>(6)</sup> and even a research developed with different cutoff points and classifications<sup>(14)</sup>. Such evidence can be explained by the fact that the participants of the study developed in Paraná<sup>(6)</sup> who were users of the third age gym, while the participants of another study carried out in Minas Gerais<sup>(6)</sup>, that had a good health status, in addition to those with a higher level of

Table 4 - Final regression models for overall self-esteem and Quality of Life facets, Ribeirão Preto, São Paulo, Brazil, 2020

	Non-standardized β	Standardized β	Standard error	95% CI	p	Durbin-Watson	R <sup>2</sup>
Sensory skills	1.307	0.340	0.245	0.825-1.789	< 0.001	1.992	0.123
Autonomy	2.101	0.569	0.211	1.686-2.517	< 0.001	1.960	0.294
Past, present, and future activities	2.486	0.605	0.221	2.052-2.920	< 0.001	2.053	0.375
Social presence	2.547	0.582	0.246	2.065-3.030	< 0.001	2.065	0.319
Death and dying	2.175	0.425	0.324	1.539-2.812	< 0.001	1.956	0.135
Intimacy	2.378	0.562	0.235	1.917-2.838	< 0.001	1.969	0.336
Overall quality of life	2.166	0.733	0.141	1.889-2.443	< 0.001	1.959	0.508

education had the best self-esteem scores. Therefore, it is inferred that physical activity and the increase in social presence provided by the elderly gym, as well as education, are three factors that can positively influence the level of self-esteem of elderly people.

The fact that most of the participants in our study present satisfactory self-esteem gives health professionals a sense of accomplishment, since self-esteem is considered an essential factor in old age and corresponds to one of the personality dimensions that exerts the greatest influence on wellbeing and adapting to the world; therefore, it is a relevant aspect for success and satisfaction with life<sup>(14)</sup>. In addition, higher self-esteem scores have been associated with positive attitudes towards health, while low scores are related to risky behavior, such as suicidal behavior<sup>(15)</sup>. In this sense, we bring an inference about the self-care of the elderly with their health: we noticed better self-esteem scores among females, as men only seek health services when they are already ill, which, consequently, can compromise their health, self-esteem, and QoL, considering possible causality between these variables.

From this perspective, given the negative effects of low self-esteem, we should not ignore the reality of the other 25.2% of participants who had unsatisfactory self-esteem. Although they constitute a minority in our study (n = 131), this lower proportion does not prevent them from suffering the harmful consequences nor does it reduce the right of these elderly people to access all means that preserve their physical and mental health, as recommended by the Statute of the Elderly<sup>(16)</sup>. Some alternatives with beneficial effects on elderly's self-esteem can be mentioned, such as living in a good family system, participating in activities and social groups<sup>(1)</sup>, practicing physical activities<sup>(17)</sup>, encouraging the expression of sexuality<sup>(18)</sup>, and sexual activity<sup>(19)</sup> among others — were all included as comments in the online invitation, during data collection. These beneficial effects for self-esteem, proven through studies, also collaborate with the improvement of QoL.

Another relevant finding of our study was the association found between self-esteem and ethnicity, education, and sexual orientation, similar to other studies that also found a statistically significant association of low self-esteem with non-white people (20), lower education level (21), and those whose sexual orientation does not include heteronormativity (22).

In more detail, our results showed that participants who self-declared as yellow ethnicity, with education up to middle school, and bisexuals had unsatisfactory self-esteem. As for satisfactory self-esteem, the highest statistically significant proportion was found among self-declared browns, with higher education and

heterosexuals. This may be due to better income, employment, and access to health care opportunities without suffering discrimination within these services, contrary to what is observed among people belonging to minority groups from a social point of view, such as yellow people, with low education, and outside the heterosexual pattern.

In Brazil, the yellow ethnicity classification refers to people of Asian origin who reside in the Brazilian territory<sup>(23)</sup>. Although the yellow elderly have shown significant proportions of unsatisfactory self-esteem, there is no data in the literature on this ethnic group to encourage discussion. The few existing studies address issues of racial discrimination with a focus on the black population of different age groups, not necessarily focusing on the approach to the elderly population.

In this sense, international studies have shown an association between exposure and racial discrimination with negative impacts on the mental health of victims aged between 18 and 58 years old<sup>(20)</sup> and between 18 and 76 years old<sup>(24)</sup>. Otherwise, there is a Brazilian study developed with women between 18 and 24 years old that did not identify a statistically significant association between the level of self-esteem and self-reported race/color, although black participants showed the lowest mean self-esteem scores when compared to non-black participants<sup>(15)</sup>.

Furthermore, the fact that the self-declared brown elders have better self-esteem in our study may be associated with issues related to the "strength of racial identity", defined as the positive feeling of belonging and attachment to their identity<sup>(15)</sup>, which increases their self-esteem and acts to protect these people from the internalization of bad feelings resulting from discrimination<sup>(25)</sup>. Therefore, self-esteem is, in most cases, a psychological strategy for protection, adaptation, and coping with stressful events<sup>(26)</sup>.

As for the association found between self-esteem and education level, our results corroborate a study<sup>(21)</sup> carried out with 980 elderly Brazilians, which identified lower education level as a predictor of low self-esteem. They also ratify another study<sup>(14)</sup> carried out with 279 elderly people, in which a higher level of education was significantly associated with a higher level of self-esteem among the participants. From this perspective, it can be inferred that more educated elderly people have greater self-esteem, as they take care of their health more frequently and carefully, thus preserving their health and QoL during their aging process.

The literature points out that education plays a fundamental role with regard to the feeling of security and dignity in social relationships, leading to better self-esteem among the elderly<sup>(14)</sup>,

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especially among those who have never had the opportunity to study<sup>(21)</sup>. In addition, higher education is associated with better social opportunities, access to information, better living conditions<sup>(21)</sup>, use of health services, adherence to health and educational programs focused on health promotion and protection<sup>(14)</sup> and, above all, the search for knowledge, which promotes positive impacts on self-esteem<sup>(21)</sup> — these results are confirmed by ours, in which seniors with higher education showed satisfactory self-esteem.

Regarding sexual orientation, a study<sup>(22)</sup> developed with 316 individuals belonging to the community of Lesbians, Gays, Bisexuals, Transvestites, Transsexuals, Queers, Intersex People, and other identities (LGBTTQI+) identified three feelings that predominated among the participants: sadness (52.2%), low self-esteem (37.7%), and anxiety (35.7%). In our study, we identified poor self-esteem among elderly bisexuals, while heterosexuals showed better self-esteem.

We emphasize that the LGBTTQI+ community faces significant conflicts when going against the heteronormative standard and its hegemony in the systems of values and behaviors, in addition to sexual and social standards. In this sense, any manifestations that are not within the heterosexual scope can be the target of physical, sexual, and/or psychological violence, which, in turn, result in negative repercussions for the mental health and QoL of this public. These negative effects include an increase of approximately six times more chances of suffering depressive states and their consequences such as fear, anxiety, social isolation, guilt, shame, hostility, use and/or abuse of psychoactive substances, confusion<sup>(22)</sup>, among others, such as reduced self-esteem.

Therefore, considering that self-esteem is an important marker of mental health, and the literature presents a significant limitation in the number of studies that investigate this topic and the QoL of the LGBTTQI+ audience, we highlight the need to develop more current investigations in order to find connections between self-esteem and several variables related to this specific group<sup>(27)</sup>.

Our results showed that, regardless of the self-esteem classification, the elderly had better QoL in the Sensory Skills facet, confirming data from similar studies (4,28-29) and diverging from another (30), in which the elderly had a greater perception of QoL in the Intimacy facet. The Sensory Skills facet is responsible for evaluating the loss of senses (hearing, vision, touch, and taste) and its impacts on the QoL of the elderly (31). This is a fundamental facet, as any change in the sensory components of the elderly interferes in an undesirable way in their QoL, since the sensory functions are responsible for establishing relationships between the individual and the world, being able to influence their patterns and behavior (4).

We observed that elderly people with unsatisfactory self-esteem have the lowest QoL scores in all facets, evidencing worse QoL when compared to elderly people with satisfactory self-esteem. These results corroborate a Brazilian study<sup>(4)</sup> carried out with 1,691 elderly people, in which participants with lower self-esteem had the worst QoL scores. Furthermore, our final linear regression analysis revealed that the self-esteem scale remained positively associated with all facets of QoL, explaining 50.8% of the relationships between self-esteem and the general quality of life of the elderly who participated.

We emphasize that self-esteem is a positive factor for the QoL not only of the elderly, but also of other age groups in different clinical contexts, as observed in investigations carried out with individuals with a mean age of 45.47 years after kidney transplantation<sup>(32)</sup>; women diagnosed with fibromyalgia with a mean age of 42.7 years<sup>(33)</sup>; and obese adolescents with a mean age of 15.3 years<sup>(34)</sup>.

#### Limitations of the study

The results presented here must be interpreted with caution, given that the non-probabilistic sampling used does not allow extrapolating the results to the elderly population in general, which ends up becoming a limitation of the study. Another limitation concerns the possible selection bias, since, as data collection took place online, elderly people living in a situation of social vulnerability were indirectly excluded from the sample, either because they do not have access to the internet, or due to the low level of education, which possibly hindered the ability to read and understand texts.

Finally, although there is a progressive increase in scientific publications in the field of human aging, there is a considerable quantitative limitation of national and international studies that analyze the mental health of the elderly<sup>(35)</sup>, especially regarding self-esteem and its relationship with QoL<sup>(4)</sup>. In this sense, it was not possible to make further comparisons with our results. This reality reinforces the need for more investigations on self-esteem among the elderly, as our findings point to self-esteem as a non-pharmacological strategy that can help increase the quality of the additional years of life in this age group.

#### Contributions to the field of nursing

This study contributes by providing subsidies for the creation of strategies capable of providing old age with self-esteem and QoL. Our results have the potential to change the fragmented and medicalized care practice, especially in Primary Care, in which health care for the elderly is focused on chronic-degenerative pathologies and there is an invisibility of the elderly's self-esteem in their biopsychospiritual state. Therefore, we emphasize the importance of health professionals, especially nurses, to expand their knowledge about comprehensive care and to be based on nursing values, especially regarding holistic care.

In this sense, we bring to nursing the need for a more attentive and less simplified look at this population. With the knowledge generated here, it is possible to assume a differentiated practice in nursing, aimed beyond the bodily and physiological needs of elderly people, which will trigger the creation of new methods for the evolution of self-esteem and, consequently, improvement in QoL. For example, the past, present, and future activities facet had the highest correlation coefficient with self-esteem. In this sense, health professionals can draw attention to this facet in order to explore the perspectives of the elderly in these three time spaces and intervene with educational approaches on the peculiarities of aging and ways to adapt and enjoy this new stage of the vital cycle.

Another point that deserves to be highlighted is that the minority groups in our study (low education, yellow, and bisexual

people) need more attention from professionals, as they had worse self-esteem. These are groups that often suffer from health inequities, and therefore face obstacles to accessing services efficiently, which can bring undesirable effects to their health, self-esteem, and QoL. Here, we reinforce the commitment that must exist with users of the Unified Health System, as one of its principles is "equality of health care, without prejudice or privileges of any kind", as provided for in current legislation (36).

Finally, it is noteworthy that we address an audience with characteristics not very much observed in the literature (elderly people with high education), which makes our study innovative in the area. Furthermore, we emphasize that high education may be a predominant feature in the future generation of elderly people, as there is an expansion of undergraduate and graduate courses in Brazil, and this may affect the profile of this public in the future. Due to this process, it is relevant to develop more studies that produce early knowledge of this group of elderly people.

#### CONCLUSION

We conclude that most elderly people have satisfactory self-esteem. Furthermore, self-esteem was significantly associated with ethnicity, education, and sexual orientation, with the best self-esteem being identified among brown, college-educated, and heterosexual participants. On the other hand, we identified that the worst self-esteem was among the self-declared yellow, with low education, and bisexual elderly.

We also observed that, regardless of the self-esteem classification, the elderly showed better QoL in the Sensory Abilities facet,

and the highest correlation coefficient was identified in the Past, present, and future activities facet, when compared to self-esteem.

Furthermore, the elderly with unsatisfactory self-esteem showed worse QoL in all facets evaluated; and we observed that satisfactory self-esteem has a positive association with QoL, assuming, therefore, a directly proportional behavior, and the final self-esteem score explained 50.8% of the variation in the participants' general QoL data.

We therefore suggest the development of local policies capable of raising the self-esteem of the elderly and reaffirming aging as a new possibility for discoveries and pleasure. It is difficult to say here how these local policies should be carried out, given the need to consider the reality of each individual who is inserted in a given geographic space and who shares different individual and collective characteristics - because they are different needs, the process becomes unique and dynamic. Therefore, the health professional, especially the nurse, must carry out situational diagnoses and determine priorities identified in loco so that, with this survey, there is the necessary planning and health interventions to increase the elderly person's self-esteem.

#### SUPPLEMENTARY MATERIAL

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