Relationship between the perception of aging and life satisfaction in healthy older adults

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ABSTRACT

Objective: To investigate the association between the perception of aging and life satisfaction in healthy older adults. Method: The sample consisted of 1015 older adults who attended the Active Maturity groups of the Social Service of Commerce of Rio Grande do Sul (SESC/RS), Brazil. The Generalized Anxiety Inventory, Self-Esteem Scale, Perceived Stress Scale, General Health Inventory (GHQ12) and Social Well-Being Scale were used. For data analysis, Pearson's correlation was used to assess the correlation between life satisfaction and the perception of aging. Logistic regression was also performed to assess factors associated with life satisfaction. Results: In general, the elderly had a good perception of health, 88.1% considered it good to excellent. The self-perception of the quality of aging highlighted as good or excellent was 94.6%. It is important to highlight that the elderly with a poor perception of aging were three times more likely to have dissatisfaction with life. As for social support, all elderly people have someone to count on when they need help. Regarding the emotional and psychological aspects, it was found that most of the elderly had anxiety (24.82±2.97); perceived stress (45.24±5.23); social welfare (72.33±0.28); subjective well-being (30.83±3.50;). In addition, most of the elderly practiced physical activity and had lived in the groups for more than 4 years. Conclusion: The elderly had a healthy profile and it was found that the perception of old age has an impact on the satisfaction with the life of the elderly.

Keywords: Aging, Mental health, Well-being.

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INTRODUCTION

According to IBGE projections (2020), the number of elderly people over 65 years of age in 2060 is expected to reach 58.1 million, in contrast to the 24.3 million expected in 2024. With this growth, the Pan American Health Organization (PAHO) is leading the initiative of the Decade of Healthy Aging in the Americas (2021-2030), in which it defined strategies for older persons to enjoy and participate fully in society by achieving healthy and dignified aging, (Amuthavalli 2022).

PAHO's strategies to guide individuals to reach an advanced age in optimal health, recognizing that health encompasses physical, psychological, and social dimensions, were established because increased longevity does not always translate into healthy aging. Often, the aging scenario is fragile, characterized by the high prevalence of chronic diseases, functional dependence, mental disorders, and negative impacts on the life satisfaction of the elderly (Daniel, Antunes, and Amaral 2015 and Maresova et al., 2019).

The concept of healthy aging, in some studies, is associated with Health-Related Quality of Life (HRQoL), flexibility, activity, and number of close friends (Rahimi et al. 2014, Montross et al. 2006, Cho et al. 2015, Zhao et al. 2014, and Estebsari et al. 2014). In others, the factors considered are diseases and disabilities, cognitive and physical function, social communication, and productive activities, as demonstrated by Cho J (2015) and McLaughlin (2010). [33, 34]. In line with these studies, Menezes et al. (2016) state that aging is a heterogeneous, particular and peculiar process for each individual.

Carneiro et al. (2017) analyzed 360 older adults aged 65 years or older, assisted by the Mais Vida program by the Minas Gerais State Department of Health. The authors sought to understand the prevalence and factors associated with frailty in the elderly. The study pointed to depressive symptoms, with a prevalence of 55.6% of the elderly (n=94) against 75 elderly who did not present the symptom, in addition to osteoarticular disease, as well as a history of hospitalization and falls in the last 12 months.

Therefore, the importance of maintaining mental health during the aging process is indisputable, as it implies the ability to deal with the challenges inherent to the passing of the years, and also directly influences the individual's productive contribution to society (KAUFMAN; JOHNSON; LIU, 2008). In addition, the psychosocial and emotional changes that accompany aging and can lead to life dissatisfaction include decreased self-esteem and subjective well-being, increased perceived stress and anxiety (Oliveira *et al.,* (2018).

Our research seeks to examine the view of healthy older adults who are part of a coexistence group under their aging process and how it affects their level of contentment with life.

To do this, we developed a two-level predictive model. At the first level, we consider social and economic factors, such as education level and social support, that influence the perception of life

satisfaction. At the second level, we analyzed how these factors affect the perception of aging itself and self-esteem, which in turn are more directly linked to life satisfaction (figure 1).

The model predicts that part of the effects of factors at a higher level are mediated by their influence on factors at lower levels, considered to be determinants closer to life satisfaction. Therefore, it is possible that the perception of aging is a strong predictor of satisfaction with life, since this variable (a) mediates the effects of hierarchically superior variables and (b) is closer to the outcome, compared to level 1 variables.

Figure 1 – Hypothesis of the study

Level 1	Social and economic factors (schooling, social support and social welfare)
Level 2	Psychosocial factors (perceptions of aging and self-esteem assessments)
Denouement	Life Satisfaction

METHOD

The study included 1015 elderly people, of both sexes, who are part of the Active Maturity groups of the units of the Social Service of Commerce of Rio Grande do Sul (SESC/RS). The sample was selected in a non-probabilistic manner and intentional for convenience. To be included in the study, the elderly had to be part of the groups for at least 6 months. Older adults who self-reported having psychiatric illnesses such as depression and anxiety were excluded from the logistic regression analysis for the absence of psychiatric illnesses (n=769). This exclusion criterion was adopted because the presence of psychiatric illness could interfere with the perception of aging and satisfaction with life.

To assess the sociodemographic and health profile, a structured questionnaire was applied, with questions related to gender, age (years), monthly income (grouped into the "no income" brackets; "from 1 to 5 minimum wages"; from "5 to 10 minimum wages" and "more than 10 minimum wages"), schooling (in years), occupational status (Non-active and Active), race (white, black, brown), retirement (yes or no), smoking (never smoked; smoker; ex-smoker); perception of health (fair; good; very good; excellent; poor); perception of aging (poor; fair; good; very good; excellent); social support (present or not); time attending Active Maturity groups; from six months to one year; two years; three years; more than 4 years); physical activity (yes or no); frequency of physical activity (once a month; once a week; twice a week; more than 3 times a week; once every 15 days).

To measure the level of anxiety of the elderly, the Geriatric Anxiety Inventory was used, validated for the Brazilian population taken from Martiny Camila et al. (2011). This questionnaire consists of 20 questions, with binary answers. An individual who obtained a score of 10 or more was considered to be suspected of generalized anxiety.

To assess self-esteem, we used the Rosenberg Self-Esteem Scale (1965), validated for the Brazilian population, as reported by Hutz et al. (2011). It is a one-dimensional scale consisting of 10 statements related to a set of feelings of self-esteem and self-acceptance that aims to assess the individual's overall self-esteem. The statements were answered on a 4-point Likert scale ranging from (1) *strongly disagree to (4) strongly agree.* The result is obtained by the sum of the scores, which can vary from 10 to 40 points, with higher values indicating higher self-esteem.

Perceived Stress was assessed using the Brazilian version of the scale, which was translated and validated for the elderly population, and consists of 14 questions by Luft et al. (2007). The items evaluated in this scale refer to feelings and thoughts during the last month. The scale score is given by a 4-point Likert scale ranging from *(0) never to (4) always*. The final score is the sum of the points, which can vary from 0 to 56 points, with the higher score indicating the higher incidence or perception of stress.

To measure the subjective well-being of the elderly, the General Health Questionnaire (GHQ12) was applied. This is an abbreviated version of Goldberg's General Health Questionnaire (1972), adapted for Brazil by Pasquali et al. (1994). This version consists of 12 items. The score of the scale is given by a 4-point Likert scale ranging from *(1) absolutely not to (4) much more than usual*. The final score ranges from 12 to 48 points, with the highest score indicating lower life satisfaction.

In order to assess sociability, the Social Well-Being Scale created by Keyes in 1998 was applied. In the present study, the summary scale validated in the Portuguese population conducted by Lages et al. (2018) was used. This version has 19 items, the participant assigns from 1 to 7, in which *(1) strongly disagree and (7) strongly agree.* High scores mean that people are unsociable and see themselves as not as socially important.

Data collection was carried out in April and May 2021. The elderly were approached via social networks (WhatsApp) by the facilitators of the Active Maturity groups of SESC/RS and were instructed to fill out the sociodemographic questionnaire and scales *via Google Forms.* The elderly who agreed to participate in the study gave a positive (yes) rating on the online Free and Informed Consent Form (ICF).

In the logistic regression, the hypothesis of a relationship between the exposure variables and the outcome (satisfaction with life) was verified, organized into two hierarchical levels. At the first level, social and economic variables were included (schooling, social support and socialization) and, at the second level, psychosocial variables were added (perception of aging and self-esteem).

The sample size was calculated based on the study by Oliveira *et al.* (2017) in which a difference of 2 points in the life satisfaction scale was observed between individuals with good life perception compared to older adults with poor/regular life satisfaction. To maintain an alpha=0.05%,

power of 80% and a mean difference of 2.0 points on the scale, 495 individuals were calculated. The increase was 10% for eventual losses and 15% for adjusted analysis, totaling 619 older adults.

Variables with normal distribution were presented as mean ± standard deviation and variables with asymmetric distribution as median (25th percentile and 75th percentile). Data normality was assessed using the Kolmogorov-Smirnov test. Sperman correlation was performed to assess the correlation between life satisfaction and the perception of aging. Logistic regression was also performed to assess factors associated with life satisfaction. For logistic regression analysis, the life satisfaction score was stratified into two categories (satisfactory or unsatisfactory) based on the 50th percentile of a normal distribution.

The present study was approved by the Research Ethics Committee (REC) of La Salle University under CAAE number: 41004120.5.0000.5307

RESULTS

A total of 1015 elderly members of the Active Maturity Group of SESC-RS participated in this study. The sociodemographic variables are shown in Table 1. In general, the elderly had a good perception of health, 88.1% considered it good to excellent. The perception of aging (good to excellent responses) was 94.6%. As for social support, all elderly people have someone to count on when they need help. Regarding the emotional and psychological aspects, it was found that most of the elderly had anxiety (24.82±2.97); perceived stress (45.24±5.23); social welfare (72.33±0.28); subjective well-being (30.83±3.50;).

Table 1 – Sociodemographic characteristics and health conditions of the elderly population in the Active Maturity groups of SESC/RS, Brazil (n = 1015).

Variables	All (n=1015) % (n)
Age (years)	68.54 ± 6.8
Gender	
Female	95.60 (n=970)
Male	4.4 (n=45)
Race	
caucasiana	89.40 (n=907)
Brown	8.9 (n=90)
Black	1.8 (n=18)
Schooling (years)	11.27±30 AM
Marital status	
Married	42.5 (n=432)
divorced	17.4 (n=176)
Single	9.6 (n=98)
widower	30.5 (n=309)
Family income (1 to 5 minimum wages)	83.50 (n=848)
SESC Porto Alegre	12.50 (n=126)
Retiree	89,60 (909)
In professional activity	41,70 (423)
Non-smokers	68,40 (694)
Perception of aging*	94,58 (960)

Health perception*	87,24 (895)
Social Support (yes)	90,00 (913)
Absence of psychiatric illness	77,30 (769)
SESC Time	
less than 4 years	45.51 (n=462)
more than 4 years	54.48 (n=553)
Physical activity	81,30 (825)

Note: Data presented as mean ± standard deviation and percentage.
Race: (determined by the evaluator as white, brown, indigenous or black); Marital status (married or single); Family income (stratified into minimum wages);
*Sum of answers: Good, Very Good and Excellent.

When comparing the elderly in terms of the presence or absence of psychiatric illness (Table 2), there were significant differences (p<0.05) in social well-being and subjective well-being, however, the difference found does not change the individual category in the variables evaluated. In addition, there was no evidence of statistical difference ($\chi2$ = 1.107; p=0.174) regarding the perception of health between these groups (data not shown in Table 2).

Table 2 – Emotional and psychological aspects of the elderly stratified by the presence of psychiatric illness or disorder (n=1015). SESC/RS Active Maturity Program, 2021

Emotional and psychological characteristics	Psychiatric illness	
	Yes (n=224)	No (n=769)
Social Welfare	75.46±11.26*	72.08±11.54
Self-esteem	25.23±2.26	24.93±2.08
Subjective Well-Being	31.80±0.16*	30.83±0.08
Perceived Stress	45.54±4.36	45.29±5.01
Anxiety	25.36±6.85	25.08±6.02

Note: Data expressed as mean±standard deviation; T-test for independent samples; *p<0.05.

In order to evaluate the predictors of subjective well-being in healthy older adults (without the presence of psychiatric illness), those individuals who reported having a disease/disorder were excluded from the analyses.

When correlating psychological and emotional variables, it was found that Subjective Well-Being was inversely related to schooling (r=-0.075) and showed a moderate and positive correlation with social well-being (r=0.451) and self-esteem (r=0.634) (Figure 2).

When performing logistic regression, it was possible to observe that the social and economic variables, in unadjusted analyses, showed that individuals with low schooling showed a lower chance (-29%) of being satisfied with life, compared to subjects with complete or incomplete higher education [OR = 0.71, 95% CI (0.52 – 0.97)]. This odds ratio remained virtually unchanged after adjusting for social support and social welfare.

Individuals who had social support were more likely to be satisfied with life (+73%), compared to those with precarious or no social support [OR=1.73, 95%CI (1.01 – 2.98)]; This effect remained similar even after adjusting for the other variables of levels 1 and 2. The ability to socialize

was slightly associated with a higher chance of satisfaction with life, even considering the other variables in the table [OR= 1.02, 95%CI(1.01 – 1.02)].

Regarding the psychosocial variables, in unadjusted analyses, the chance of being satisfied with life was twice as high in individuals who had an adequate perception of aging; this effect was maintained even after considering social support, social well-being and self-esteem [OR=2.10; 95%CI (1.04 - 4.25)]. Finally, high levels of self-esteem were associated with greater satisfaction with life, even after considering the other significant variables in the table [OR =1.22, [95%CI (1.12 – 1.32)] (Table 4).

Table 3 – Odds ratios for Subjective Well-Being considering schooling, perception of aging, social support and well-being, and self-esteem in older adults without psychiatric illness (Active Maturity Program – SESC/RS)

Predictive variables	Odds Ratios for Subjective Well-Being		
	OR (95% IC)[1]	OR (95% IC)[2]	OR (95% IC)[3]
Schooling (low schooling)[*]	1[**]	1[**]	1[**]
	0,71 (0,52 – 0,97)	0,73 (0,55 – 0,96)	0,73 (0,55 – 0,97)
	p<0,033	p=0,024	p=0,034
Perception of aging (worse perception)[†]	1[‡]		1[‡]
	2,47 (1,12-5,43)		3,03 (1,70 – 5,61)
	p=0,024		p=0,0001
Social Support (sometimes)	1[#]	1[#]	1[#]
	1,73 (1,01 – 2,98) p=0,046	1,60 (1,02 – 2,52) p=0,039	1,68 (1,06 – 2,67) p=0,027
Social well-being	1,02 (1,01 – 1,04) p=0,0001	1,02 (1,00 – 1,03) p=0,0001	1,02 (1,00 – 1,02) p=0,006
Self-esteem	1,23 (1,14 – 1,33) p=0.0001		1,22 (1,12 – 1,32) p=0.0001

Note: (1) Model not set; (2) Model adjusted for the variables that were statistically significant in the unadjusted model belonging to level 1; and (3) Model adjusted for the variables that remained significant at the previous level (the model that includes the level 1 variables) and the level 2 variables.
[*]low level of education: illiterate + incomplete elementary school
[**]Reference: Complete and incomplete high school + higher education (complete or incomplete)
[†]Worst Perception of Aging: Poor + Fair
[‡]good + very good + excellent
[#]absence of social support

Figure 2 – Possible relationships between psychological and emotional variables and the subjective well-being of older adults attending the SESC/RS Active Maturity Program, 2021.
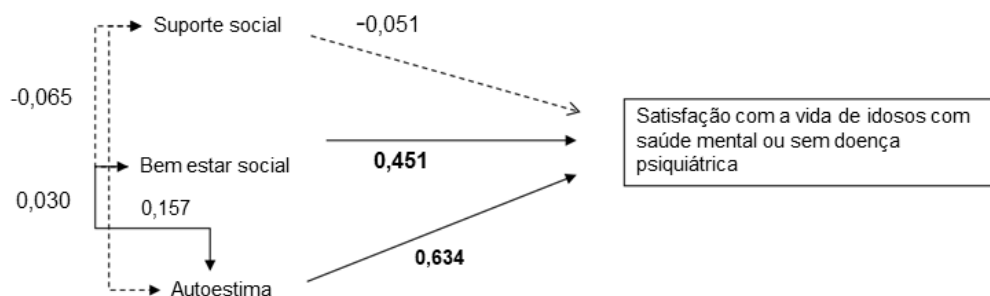
Pearson's correlation (p<0.055). --- dotted line signifies an inversely proportional correlation. ___ full line means a directly proportional correlation.

DISCUSSION

The objective of this study was to examine how healthy older adults who participate in the Active Maturity groups in SESC/RS units perceive their aging process and how this influences their level of satisfaction with life. It was observed that most of the elderly had a good perception of health and aging and considered themselves to have good social support. In addition, most of the elderly practiced physical activity and had lived in the groups for more than 4 years.

In line with our findings, a study evaluated the prevalence of pleasurable activities, subjective well-being, depression and loneliness in older adults from social groups (Minas Gerais). The study conducted by Casemiro (2020) demonstrated that coexistence groups favor mental health and contribute to successful aging, since the elderly feel socially supported, engaged in so-called pleasurable activities and also with the exchange of positive experiences (11).

The Active Maturity groups developed by SESC/RS provide socialization, physical activity, exchange of experiences and social support, and can contribute significantly to a better perception of aging and satisfaction with life.

For the authors, Okuno et al. (2020), life satisfaction is a protective factor for the development of physical and psychological disorders. In his study conducted with 128 elderly people over 80 years of age, it was observed that the higher the mental health score on the life satisfaction scale, the greater the physical, psychological, social relationships, environment and perception of life satisfaction domains. In addition, the study suggests that staying active and having social relationships in this age group can positively influence life satisfaction. In our study, a moderate and positive correlation was also demonstrated between socialization (r=0.451), self-esteem (r=0.634) and subjective well-being. This hypothesis is reinforced by Tang et al., (2017) who investigated the

relationship between engagement in social and cognitive activities and social support with the sense of community in older Chinese-Americans. The study pointed out that the importance of involvement in social activities and positive support from family and friends contributed to a greater sense of community.

In the present study, we investigated whether the perception of aging has an effect on the life satisfaction of older adults belonging to the elderly group. It was observed that older adults with better perception of aging, better self-esteem, more sociability and social support had better life satisfaction rates (Figure 2). Life satisfaction is a complex and subjective concept, as it is the way the individual experiences his or her life in the various stages of his or her development. It is a cognitive judgment of some important aspects of life such as health, work, housing conditions, and social relationships, as reported by Cordeiro et al. (2020). It is important to mention that the concept of Satisfaction with life is quite broad and refers to an individual and subjective experience of evaluating life as positive and includes variables such as subjective well-being and the experience of positive affect, WOYCIEKOSKI et al. (2012).

The findings of our study in which older adults with a better perception of aging have better satisfaction with life are corroborated in the literature with the study by Ulloa, Moller & Sousa-Poza (2013), who suggest a U-curve for life satisfaction. These studies describe life satisfaction as taking on higher values at younger ages and at older ages, with the lowest values among them at age 40-50 (Dolan, Peasgood & White 2008). For the elderly participating in the SESC/RS Active Maturity program, participation in social groups offers opportunities to receive emotional, informational and instrumental support, as the significant bonds established between the elderly have positive impacts both physical and mental, acting as a resource of protection against loneliness. In our research, we observed that socialization played a protective role in the subjective well-being of the elderly. A previous study confirmed that participation in coexistence groups protects older adults against feelings of loneliness and social isolation, (Casemiro 2020).

The study by Rodrigues et al. (2019) showed that socially engaged older adults were more active and satisfied when compared to those with low engagement. Also according to the authors, successful aging is linked to three factors: *i)* social engagement, *ii)* opportunities in the environment, and *iii)* personality, which influence relationships. The groups provide a source of love, security, belonging, making the elderly feel loved and capable, favoring the satisfaction of well-being.

Studies show that successful aging has the following principles: minimizing the risk of disease and disability; maintaining physical and mental functions, and continuing to "be involved with life". Just as active aging is based on self-care and the participation of the elderly in the health dimensions, benefiting their participation in programs aimed at the elderly, (Daniel et al. 2015, Cordeiro et.al 2020 and Gato et al. 2018).

Regarding the perception of aging, in our study, 94.58% of the elderly considered their aging good, very good or excellent. However, the smallest portion had a low perception of aging (5%), which corresponded to three times more chance of being dissatisfied with life (OR = 3.03 (1.70 – 5.61); p = 0.0001). Studies suggest that there are different factors that contribute to the experience of a better old age, among them is the positive perception (10,17). According to these authors, the way in which individuals experience their health status and development determine their behavior, choices, and way of life.

Interestingly, the studied population had high rates of anxiety, a symptom that affects the well-being of the elderly and is also related to several psychiatric diseases. However, despite the high levels of anxiety, the sample had average indices of subjective well-being and low presence of psychiatric illness. This leads us to think that because the data was collected during the Covid-19 Pandemic. The anxiety is justified by the moment, by the isolation that was necessary, especially in this public and by the severity of the pandemic as a whole, surrounded by uncertainties.

CONCLUSION

The present study aimed to examine how healthy older adults who participate in the Active Maturity groups in SESC/RS units perceive their aging process and how this influences their level of satisfaction with life. The group of elderly people belonging to the Active Maturity Group of SESC/RS, in general, presented a good perception of health and a good perception of aging. The predictors of satisfaction with life, such as subjective well-being, self-esteem and social support, were observed in the group evaluated, demonstrating that these elderly are more likely to be satisfied with life than elderly people who do not have a good perception of aging.

This study has some limitations. The first is that the data were collected during the Covid 19 pandemic, in which the elderly were the most protected public due to isolation. The second is that all the elderly participants in the study participate in the coexistence group, on average, for 4 years and are practitioners of regular physical activity. Even during the isolation period, activities were maintained in a resumed (*online*) manner. Thus, it is not possible to generalize the findings to sedentary elderly people or those who do not participate in a social group. In addition, the group is quite uniform, practically women, belonging to the coexistence group, which possibly limits external validation.

The understanding of the mental health of the elderly and its impacts is of fundamental importance for a better quality of life of this public, considering that a successful old age reflects on functional, cognitive and morbidity conditions. Therefore, health professionals, public and government institutions should pay attention to these nuances, offering the elderly a more integrated care.

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