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Quality of Life and its Relationship with Family Functionality among Older Adults in a Region of Colombia

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ABSTRACT

Introduction: Quality of life and family functionality are key factors that impact the well-being of older adults. The objective is to identify family functionality, quality of life, and their associated factors among older adults in a region of Colombia.

Methods: A quantitative, cross-sectional, correlational study was conducted, including older adults through probabilistic sampling. Prevalence rates of family dysfunction were estimated. Chi-square tests were used for categorical variables, dichotomization by median, and Spearman correlation to analyze relationships between variables.

Results: Most older adults were married, had children, and had incomplete primary education; 68 % had chronic illness. Family dysfunction was found in 71.2% of cases, which was positively and significantly associated ($p < 0.01$) with all dimensions of quality of life evaluated in the sample ($N = 431$): Physical Health: $\rho = 0.466$, Psychological Health: $\rho = 0.515$, Social Relationships: $\rho = 0.450$, Environment QoL: $\rho = 0.569$, overall quality of life score: $\rho = 0.604$.

Conclusion: Family functionality is related to quality of life in older adults.

KEYWORDS: Academic Major Satisfaction; Academic Self-Efficacy; Mental Health Continuum; Part-Time Job; Well-Being.

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INTRODUCTION

Quality of life is an important dimension of human life, as it represents a set of conditions that promote physical and psychosocial well-being (Flores-Herrera et al., 2018). The World Health Organization relates it to the degree of satisfaction that people have with their values, culture, and life expectations (World Health Organization, 2022).

Historically, the concept of quality of life and its relationship with health has been studied. It has been proven that people who do not adopt healthy lifestyles and lack family and social support are at greater risk of developing diseases, injuries, disabilities, and consequently dependence (Paterna et al., 2012; Reynoso & Guzmán, 2025), which are precursors of quality-of-life deterioration.

Aging is having an impact on health in the countries of the Americas (Miranda et al., 2022).

In Colombia, a phenomenon of demographic aging is observed, which matches with an increase in life expectancy (Landinez-Parra et al., 2015). It is estimated that by 2048, the average life expectancy in the country will be 79 years (National Administrative Department of Statistics, 2023).

A discouraging phenomenon is that this increase comes accompanied by processes of morbidity and disability (National Administrative Department of Statistics, 2021) which affect the quality of life of this population. In fact, a study reported that depression, loss of functional capacity, excessive medication use, decreased functional capacity, presence of neuropsychiatric symptoms, cognitive decline, and family dysfunction are variables of interest that are related to the quality of life of older adults (Burks et al., 2021; de Oliveira et al., 2014).

In this context, family plays an important role in the quality of life of older adults, as it has been shown that effective social relationships have a crucial impact on a person's overall health; their absence can increase the likelihood of suffering physical and psychosocial disorders (Fernández et al., 2020). In this sense, it is established that when family dysfunction is present, the likelihood of health complications increases for those older adults already suffering from nontransmissible diseases such as

hypertension and diabetes (Durán-Badillo et al., 2022; Fitch et al., 2021).

Therefore, quality of life and family functionality become two variables of interest for public health and a challenge for health professionals in terms of promoting healthy and successful aging through interdisciplinary interventions.

LITERATURE REVIEW

Family functionality is defined as a system that integrates the ways in which members behave in daily life activities (McCubbin & Patterson, 1987). It is established that the family represents a complex network of interactions that contribute to the well-being of each person (Cardona-Arango et al., 2019). Family functionality includes adherence to established rules, support for fostering emotional, economic, physical, and social relationships, adaptation to changes, independence, and autonomy to pursue life goals (Morales-Cisneros, 2021). In this context, when the family functions properly, it generates positive outcomes that influence individuals' health. For older adults, it constitutes a favorable aspect for achieving a better quality of life.

Quality of life is a multidimensional concept that involves a holistic approach to a person. In fact, it is established that older adults who enjoy a good quality of life, have better tools to promote self-care (Vallejo-Barragán et al., 2025).

The literature reveals that older adults who perceive themselves as having a satisfactory quality of life are those who exhibit functional capacity to carry out basic and instrumental activities, give and receive social support, participate in recreational activities, and enjoy assertive communication processes at social and family levels (Villarreal-Angeles et al., 2021).

The characteristics of the social network in different communities are significantly influenced by the cultural background of those communities (Park et al., 2018).

Bélanger et al. (2016) found that greater support from spouses and friends corresponds to higher quality of life among Canadian older adults, while in Latin America, better quality of life is related to the physical and mental well-being of older adults.

On the other hand, Li et al. (2015) showed that support from friends was more important than family support among older adults in China when it came to promoting good physical health, but not mental health.

In the case of the older adult population in Iran, Jazayeri et al. (2023) found that the physical, mental, and social health of older adults in that country is unfavorable and far from meeting the guidelines established by the World Health Organization.

Considering current research, it is necessary to identify the most important factors that impact the achievement of healthy aging, to establish appropriate governmental policies by each country. Identifying family functionality and quality of life will help to restructure collective interventions to reduce morbidity and mortality rates, which currently accompany the demographic growth of this population.

As a result of the above, this study sought to determine the family functionality and quality of life of older adults in a Colombian region.

METHODS

Study procedure and data collection

A quantitative, observational, cross-sectional, and correlational study design was implemented to address the research question: Is there a relationship between family functionality and quality of life among older adults in a specific Colombian region during the second half of 2024? The study population consisted of 431 older adults aged 60 and over residing in the target region, located at 2,342 meters above sea level, with an economy based on the educational, commercial, and agricultural sectors. Inclusion criteria required participants to be aged 60 or older, be affiliated users of the public hospital in the studied Colombian region, and express willingness to participate voluntarily by signing the informed consent form. Individuals presenting with cognitive impairment that would prevent their full participation were systematically excluded from the study. The cross-sectional approach allowed for the simultaneous measurement of the variables—family functionality and quality of life—at a single point in time, enabling the correlational analysis between them within the defined population.

Sampling strategy

A stratified randomized sampling was carried out with a proportional allocation according to the provenance of users within the network of the public hospital. The strata were defined based on the main residential areas of the user population (urban and rural), and the proportional allocation was based on the number of registered users in each area.

To select participants within each stratum, a simple randomization technique was applied using a table of random numbers generated by Microsoft Excel statistical software.

Sample size calculation: For the sample size calculation, the formula for estimating a proportion in a finite and known population was used. With a total population of 7,941 users registered in the public hospital network, a 95 % confidence interval, and a 5 % margin of error, the estimated sample size was 367 participants. Finally, 431 participants were included to account for possible losses.

Instruments
For the present study, WHOQOL-BREF and the Family APGAR for adults were used as instruments.

WHOQOL-BREF is a tool that examines how individuals perceive their position in life in relation to their culture and value systems, as well as their goals, expectations, standards, and concerns (Skevington et al., 2004). In Colombia, a psychometric analysis of this instrument was conducted (Vargas & García, 2013), which maintained the same dimensions as the original version: Physical Health, Psychological Health, Social Relationships, and Environment, with a total of 26 questions.

The FAMILY APGAR evaluates overall family functionality (Arias, 1994). It consists of five questions related to Adaptation, Partnership, Growth, Affection, and Resolve.

Procedure
The surveying team received one week of training on survey administration techniques and effective communication with the older adult population.

A form was provided that included the informed consent, sociodemographic characterization questions, and the instruments mentioned. The average time for administering the instruments was approximately 40 minutes.

Upon completing data collection, the information was coded in an Excel database and subsequently analyzed using SPSS software version 26.

Ethical Considerations
This study followed the guidelines of Resolution 8430 of 1993 (Ministry of Health of Colombia, 1993); according to Article 11, this research is classified as "risk-free." The collected data were handled with strict anonymity and confidentiality; informed consent was applied and signed only by those who voluntarily wished to participate in the study.
The study was approved by [details omitted for double-anonymized peer review].

Statistical Analysis
After data collection, the information was entered into a spreadsheet developed in Excel. An initial exploratory statistical analysis was conducted to identify potential outliers and assess the nature of the variables included in the study. Subsequently, the prevalence of family dysfunction was estimated based on the cutoff points established by the scales used.

To explore the relationship between family functionality and sociodemographic characteristics, the chi-square test was applied, considering statistical significance when the p-value was less than 0.05.

Regarding the scores obtained in the functionality and quality of life scales, medians were calculated due to the non-parametric distribution of the data. Specifically, for the quality-of-life variable, the results were dichotomized using the median as a cutoff point to facilitate analysis. In addition, correlations between the scores were explored using Spearman's rho coefficient, given the ordinal and non-parametric nature of the variables evaluated.

RESULTS

A total of 431 adults aged 60 years and older from the northeastern region of Colombia were evaluated. The sample was predominantly female (66.6% [287]); the majority resided in the main urban municipality (95% [411]). Of the total sample, 34 % (147) reported being married, followed by 28.5 % (123) who were widowed. The majority had children (88.4 %) and most had attained only primary education (95 % incomplete and 19 % complete).

Regarding living conditions, 55.5 % reported owning their homes, 45.9 % reported being unemployed, in contrast with 4.6 % who received a retirement income; 87.5 % lived on less than one minimum monthly wage.

As for their health status, 68 % had a diagnosis of chronic illness, 86.3 % were affiliated with the subsidized health system, and received benefits from social programs such as "Colombia Mayor" (59.6 %) and the "Colectivo de Adultos Mayores" (67.1 %) (See Table 1).

Table 1. Sociodemographic characteristics of the sample.

Sociodemographic Characteristics			
Characteristics		Frequency	Percentage
Sex	Man	144	33.4
	Woman	287	66.6
Gender	Feminine	289	67.1
	Masculine	142	32.9
Municipality of residence	X	20	4.6
	Y	411	95.4
Marital status	Married	147	34.1
	Divorced	26	6.0
	Single	111	25.8

	Common-law union	24	5.6
	Widowed	123	28.5
Housing ownership	Rented	102	23.7
	Shared with other families	16	3.7
	Family-owned	74	17.2
	Owned	239	55.5
Highest level of education	Completed high-school	17	3.9
	Did not complete high-school	27	6.3
	Completed higher education	8	1.9
	Did not complete higher education	3	.7
	None	54	12.5
	Completed primary school	82	19.0
	Did not complete primary school	240	55.7
Current employment status	Unemployed	198	45.9
	Employed with contract (dependent)	3	.7
	Self-employed	75	17.4
	Retired	20	4.6
	Not applicable	105	24.4
	Informal worker	30	7.0
Household income	Equal to one minimum wage	39	9.0
	More than one minimum wage	15	3.5
	Less than one minimum wage	377	87.5
Religious belief	Catholic Christian	405	94.0
	Non-Catholic Christian	21	4.9
	None	3	.7
	Other	2	.5
Chronic non-communicable diseases	No	138	32.0
	Yes	293	68.0
Participates in neighborhood older adult groups	No	142	32.9
	Yes	289	67.1
Beneficiary of the state program “Colombia Mayor”	No	174	40.4
	Yes	257	59.6
Children	No	50	11.6
	Yes	381	88.4
Total		431	100

Regarding family functionality, it was observed that 71.2 % (307) of the participants presented dysfunction according to the APGAR scale (see Table 2); however, although no statistically significant associations were identified, dysfunction was more frequent among women, married and widowed individuals, those with children, the unemployed, and older adults with a diagnosis of chronic diseases.

Table 2. Relationship between sociodemographic variables and family functionality in older adults.

Variable	**Family functionality**		**Total**	**p-value**
	Dysfunctional	Functional		
Man	102 (70.8 %)	42 (29.1 %)	144 (100 %)	0.898
Woman	205 (71.4 %)	82 (28.7 %)	287 (100 %)	
Marital status				
Married	100 (68 %)	47 (32 %)	147 (100 %)	0.587
Divorced	21 (80.7 %)	5 (19.2)	26 (100 %)	
Single	83 (74.8 %)	28 (25.2 %)	111 (100 %)	
Common-law union	16 (66.6 %)	8 (33.3 %)	24 (100 %)	
Widowed	87 (70.7 %)	36 (29.2 %)	123 (100 %)	
Person has children				
No	35 (70 %)	15 (30 %)	50 (100 %)	0.838
Yes	272 (71.39 %)	109 (28.6 %)	381 (100 %)	
Highest level of education completed				
Completed high-school	10 (58.8 %)	7 (41.1 %)	17 (100 %)	0.467
Did not complete high-school	19 (70.3 %)	8 (29.6 %)	27 (100 %)	

Completed higher education	5 (62.5 %)	3 (37.5 %)	8 (100 %)	
Did not complete higher education	3 (100 %)	0	3 (100 %)	
None	34 (62.9 %)	20 (37 %)	54 (100 %)	
Completed primary school	58 (70.7 %)	24 (29.2 %)	82 (100 %)	
Did not complete primary school	178 (74.1 %)	62 (25.8 %)	240 (100 %)	
Current employment status				
Unemployed	145 (73.2 %)	53 (26.7 %)	198 (100 %)	
Employed with contract (dependent)	2 (66.7 %)	1 (33.3 %)	3 (100 %)	
Self-employed	47 (62 %)	28 (28 %)	75 (100 %)	0.136
Retired	11 (55 %)	9 (45 %)	20 (100 %)	
Not applicable	82 (78.1 %)	23 (21.9)	105 (100 %)	
Informal worker	20 (66.6 %)	10 (33.3 %)	30 (100 %)	
Religious belief				
Catholic Christian	284 (70.1 %)	121 (29.8 %)	405 (100 %)	
Non-Catholic Christian	19 (90.4 %)	2 (9.5 %)	21 (100 %)	0.128
None	3 (100 %)	0	3 (100 %)	
Diagnosis of chronic non-communicable diseases				
No	97 (70.2 %)	41 (29.7 %)	138 (100 %)	0.767
Yes	210 (71.6 %)	83 (28.3 %)	293 (100 %)	

	Frequency	Percentage
Dysfunctional	307	71.2
Functional	124	28.8
Total	431	100.0

On the other hand, correlation was explored using Spearman's test; however, within this group of older adults (n = 431), variations in age were not systematically or meaningfully related to the perception of family functionality (support, adaptation, and cohesion) (see Table 3).

Table 3. Correlation between age variable and family functionality in older adults.

			Age (must be 60 years or older)	**APGAR TOTAL**
Spearman's rho	Age	Correlation coefficient	1.000	-0.045
		Sig. (two-tailed)		0.355
		N	430	430
		N	430	431

In the analysis of quality of life, measured through a scale composed of five dimensions, general health perception was the most favorable, with a median of 6 points and 75.2 % of participants scoring above this value. In contrast, the psychological dimension had the lowest median (19 points) and the highest proportion of participants (45.9 %) scoring below the median across all evaluated dimensions. Regarding the overall score of the scale, the median was 78 points; however, only 52 % of older adults reached or exceeded this threshold (see Table 4).

Table 4. Distribution of quality-of-life scores and dimensions in older adults.

GENERAL HEALTH		
Score	Frequency	Percentage
Below the median	107	24.8
Equal to or above the median	324	75.2
Total	431	100.0
PHYSICAL HEALTH		
	Frequency	Percentage
Below the median	195	45.2
Equal to or above the median	236	54.8
Total	431	100.0
PSYCHOLOGICAL HEALTH		
	Frequency	Percentage
Below the median	198	45.9
Equal to or above the median	233	54.1
Total	431	100.0
SOCIAL RELATIONSHIPS		
	Frequency	Percentage
Below the median	184	42.7
Equal to or above the median	247	57.3
Total	431	100.0
ENVIRONMENTAL QUALITY OF LIFE		
	Frequency	Percentage
Below the median	189	43.9
Equal to or above the median	242	56.1
Total	431	100.0
OVERALL QOL SCORE		
	Frequency	Percentage
Below the median	207	48.0
Equal to or above the median	224	52.0
Total	431	100.0

When exploring correlations using Spearman's test, the total APGAR family score was found to be positively and significantly associated ($p < 0.01$) with all dimensions of quality of life evaluated in the sample ($N = 431$): Physical Health: $\rho = 0.466$, Psychological Health: $\rho = 0.515$, Social Relationships: $\rho = 0.450$, Environmental Quality of Life: $\rho = 0.569$, and the overall quality of life score: $\rho = 0.604$. These results suggest that higher levels of family functionality, as measured by the APGAR scale, were associated with better perceived quality of life across its various domains. The strongest correlation was with the overall quality of life score ($\rho = 0.604$), and the weakest was with the social relationships dimension ($\rho = 0.450$).

Additionally, the participants age did not show a significant association with the total APGAR score ($\rho = –0.045$; $p = 0.355$), indicating that within this group of older adults, the perception of family functionality is independent of age variation (see Table 5).

Table 5. Correlation between family functionality scores and quality-of-life dimensions in older adults.

			Apgar Total	Physical Health	Psychological Health	Social Relationships	Environmental Quality of Life	Overall QoL Score	Age
Spearman's rho	Apgar total	Correlation coefficient	1.000	.466**	.515**	.450**	.569**	.604**	-0.045
		Sig. (two-tailed)		0.000	0.000	0.000	0.000	0.000	0.355
		N	431	431	431	431	431	431	430

**. Correlation is significant at the 0.01 level (two-tailed).

DISCUSSION

General results discussion

Quality of life, defined as "*an 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*" (WHOQOL Group, 1993, p. 153), has become one of the main global concerns, particularly as life expectancy continues to increase. Older adults face a reduction of income, an increase of chronic non-communicable diseases, and diminished cognitive abilities, all of which demand substantial family and social support, that in many cases is absent.

The present study found that most participants reported family dysfunction, with this perception being more common among married older adults, women, those with children, and individuals identified as Roman Catholic Christians, findings that align with those reported by de Oliveira et al. (2014). Additionally, family dysfunction was more prevalent among those with chronic illnesses, which contrasts with findings by Durán-Badillo et al. (2022) in Mexico. These discrepancies may be explained by the family or social background of the older adults in this study, most of whom are low-income or unemployed, a key factor in their perceived quality of life.

Regarding educational attainment, our study found that most individuals reported family dysfunction had not completed primary education, a result that are like those reported by Cardona-Arias et al. (2016) in the region of Antioquia, Colombia, and by Oliveira et al. (2014) in Brazil.

In terms of employment status, we found that unemployed older adults perceived a lower quality of life, a similar result to those of other authors who noted that employment is an important factor affecting quality of life in older adults (Min & Cho, 2018; Zhu et al., 2024).

Anum et al. (2024), in their study, found that older age, depression, chronic illness, and low social support were associated with poorer quality of life. Likewise, living in urban or nearby areas, facilitating better access to healthcare services and greater employment opportunities, was associated with a better quality of life.

Our findings showed that general health perception remained high for most of the samples. However, in the psychological domain, a considerable proportion of participants reported levels below the median, suggesting the need for targeted interventions aimed at improving the psychological well-being of this population. The quality of life of older adults is directly related to good mental health, personal growth, and a sense of purpose, and inversely related to conditions such as depression and anxiety (López et al., 2024).

CONCLUSIONS

Family functionality was related to the dimensions of quality of life, physical health, psychological health, social relationships, and environmental quality in the older adults who participated in the study. The correlational analysis revealed a positive and statistically significant association ($p < 0.01$) between the total APGAR family score and all dimensions of the quality-of-life evaluated. Specifically, the strongest correlation was observed with the overall quality of life score (p\rho = 0.604$), while the social relationships dimension showed the weakest, yet still significant, correlation (p\rho = 0.450$).

These results suggest that higher levels of perceived family functionality are associated with a better overall quality of life across its various domains in this population4. Furthermore, family dysfunction was prevalent in the sample, observed in 71.2% of cases, and was more frequent among specific groups such as women, married and widowed individuals, the unemployed, those with children, and older adults with a diagnosis of chronic diseases. The findings underscore the critical role of family support as a key factor impacting the well-being of older adults in this Colombian region.

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Conflicts of Interest: The authors declare no conflict of interest.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of the Department of Science and Technology.

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