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### **ORIGINAL**



# Quality of Life Related to the Health of the Population of Los Piletones, of the Autonomous City of Buenos Aires during the year 2024

Calidad de Vida Relacionada con la Salud de la Población de los Piletones, de la Ciudad Autónoma de Buenos Aires durante el año 2024

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### **ABSTRACT**

**Introduction:** health-related quality of life is increasingly relevant as a way to study population health. This concept refers to the individual's subjective perception of his or her current health situation.

**Method:** cross-sectional study, in which 45 individuals residing in the Villa Piletones neighborhood of the Autonomous City of Buenos Aires were included during September 2024. Health-related quality of life was measured by means of the EQ5D-3L instrument, the visual analog scale and a question from the SF-36 health questionnaire. **Results:** mean age 44,89  $\pm$ 14,77. Regarding the EQ-5D-3L, the best possible health status was the most prevalent (28,89 %), followed by moderate compromise in the pain/discomfort and anxiety/depression dimensions (22,22 %), and by moderate compromise in the anxiety/depression dimension (15,56 %). The value obtained on the visual analog scale was 71,78  $\pm$ 19,60. Regarding the self-report of health status through the SF36, the most prevalent status was fair or poor, with 48,89 %.

**Conclusions:** disturbances such as anguish and depression and pain perception were the most reported, situations such as poverty, low educational level and age are determinants of health-related quality of life.

Keywords: Life Quality; Health Related Quality of Life; HRQOL; Self- Perception; Poverty.

# RESUMEN

**Introducción:** la calidad de vida relacionada con la salud es cada vez más relevante como una manera de estudiar la salud de la población. Este concepto se refiere a la percepción subjetiva del individuo acerca de su situación actual de salud.

**Método:** estudio de corte transversal, en el cual se incluyeron 45 individuos residentes del Barrio Villa Piletones, de la Ciudad Autónoma de Buenos Aires, durante septiembre 2024. Se medió la calidad de vida relacionada con la salud a través del instrumento EQ5D-3L, la escala visual análoga y una pregunta del cuestionario de salud SF-36.

**Resultados:** edad promedio 44,89  $\pm$ 14,77. En cuanto al EQ-5D-3L, el mejor estado de salud posible fue el más prevalente (28,89 %), seguido por compromiso moderado en las dimensiones dolor/malestar y ansiedad/depresión (22,22 %), y por compromiso moderado en la dimensión ansiedad/depresión (15,56 %). El valor obtenido en la escala visual análoga fue de 71,78  $\pm$ 19,60. Respecto al autorreporte del estado de salud a través del SF36, el estado más prevalente fue regular o malo, con 48,89 %.

**Conclusiones:** las alteraciones como angustia y depresión y la percepción del dolor, fueron las más reportadas, situaciones como la pobreza, bajo nivel educacional y la edad son determinantes de la calidad de vida relacionado con la salud.

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Palabras clave: Calidad De Vida; Calidad de Vida Relacionada con la Salud; CVRS; Autopercepción; Pobreza.

### **INTRODUCTION**

Quality of life (QOL) is a multidimensional concept encompassing physical and mental health, lifestyle, housing conditions, job and educational satisfaction, and economic status. It is, in short, one of the indicators of a population's well-being. (1)

The idea of quality of life emerged in the United States after World War II as an attempt by researchers to understand people's perceptions of whether they had a good life or felt financially secure. Its widespread use began in the 1960s when social scientists began researching QoL by collecting objective information and data such as socioeconomic status, educational level, and type of housing. However, these economic indicators were often insufficient, as they could only explain 15 % of the variance in individual QoL.

In response, some psychologists suggested that subjective measurements could account for a higher percentage of variance in people's QoL since psychological indicators such as happiness and satisfaction explained 50 % of the variance. (2)

The World Health Organization (WHO) defines quality of life as: "how an individual perceives their life, the place they occupy in the cultural context and the value system in which they live, their relationship with their goals, expectations, standards, criteria, and concerns, all of which are permeated by daily activities, physical health, psychological state, degree of independence, social relationships, environmental factors, and personal beliefs".(3)

# Health-related quality of life (HRQoL)

The term health-related quality of life (HRQoL) emerged as a concept that refers to assessments of an individual's perception of health in both objective and subjective aspects. (4)

HRQoL refers to an individual's subjective perception of their current health status and the health care needed to achieve and maintain an overall level of functioning that allows them to perform the activities of daily living that are important to them and affect their overall well-being. HRQoL is a construct whose most relevant dimensions for measurement are social, physical, and cognitive functioning, mobility, personal care, and emotional well-being.

Some studies have reported differences in individuals' perceptions of their health status related to gender, culture, environment, socioeconomic status, and level of education, among other factors, regardless of their health or disease status. On the other hand, factors such as symptoms, medical and family support, and access to health services are frequently associated with the assessment that individuals with the same pathology make of their health status. (5) Thus, health professionals and those responsible for planning and decision-making have recognized the importance of measuring HRQoL for decision-making regarding patients and the design of health policies.

# Los Piletones - Autonomous City of Buenos Aires (CABA)

The Los Piletones neighborhood belongs to CABA, commune 8: Villa Soldati. It covers an area of 8,34 hectares, with paved but narrow streets and irregular blocks. It has good public transportation access, with many bus lines, the metro, and the Roca railway a few blocks from the neighborhood.

Regarding health, it has CeSAC No. 24, located one block from the neighborhood, across the pedestrian bridge, and a small clinic inside the neighborhood, which is run by the Margarita Barrientos Foundation, one of the neighborhood's leading organizations. In addition, if necessary, the population has access to the Parmeño Piñero General Acute Care Hospital, the José M. Penna General Acute Care Hospital, and the Cecilia Grierson Higher School of Nursing, all of which are located a short distance from the neighborhood. (6)

### **METHOD**

This was a quantitative, observational, descriptive, cross-sectional study that included individuals residing in the Los Piletones neighborhood of the Autonomous City of Buenos Aires during September 2024.

The study's target population consisted of all men and women aged 18 years and older. The sample was selected probabilistically and by systematic random sampling with a frequency of 1:1.

A final-year medical student conducted a survey in September 2024. The first five participants underwent a pilot test to assess their understanding of each question and the need for correcting/modifying the data collection questionnaire.

Each participant was interviewed individually, and measurements of sociodemographic characteristics (gender, age, schooling, living situation, level of education, employment), anthropometric data such as height and weight, both self-reported and BMI, and relevant medical history were taken.

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Each interview was conducted in approximately 5 minutes, with no need for further adaptations after the pilot test.

The respondent's current health status and self-assessment were measured using the Spanish version of the EQ5D-3L instrument and the visual analog scale (VAS). Participants defined their health status according to the five dimensions. Then, they assigned an overall value to their current status on the VAS, graded from 0 to 100 (0 being the worst possible health status and 100 the best). In addition, a question from the SF-36 health questionnaire (self-assessment of individual health status) was included.

Some variables used in this study were health-related quality of life and self-assessment of health status. The additional material provides details of the complete operationalization of all variables.

## **Descriptive statistics**

The mean and standard deviation or median and interquartile ranges for quantitative variables were calculated according to the observed distribution. For categorical variables, relative frequency was reported as a percentage and absolute frequency. The reported values were presented with 95 % confidence intervals.

### **Analytical statistics**

The association between health-related quality of life, sociodemographic variables, and self-perceived health was evaluated.

For all cases, values of p<0,05 were considered statistically significant. The statistical program Stata version 13 was used for all analyses.

### Inclusion criteria

- 1. Men and women aged 18 years or older.
- 2. Residents of Los Piletones.
- 3. Those who freely expressed their willingness to participate in the study.

#### Exclusion criteria

- 1. People with cognitive impairment, dementia, or psychiatric illness that affects their judgment and/or behavior.
  - 2. People living on the streets.
  - 3. People who have experienced bereavement in the last 6 months.

# **RESULTS**

Of the 45 volunteers surveyed, 60,00 % (27) were women, and the overall average age was  $44,89 \pm 14,77$  (range 19,08-76,85). Figure 1 presents complete details of the socio-demographic characteristics of the study population.

The most relevant data showed that most of the population surveyed lived with their families (48,89%, 95% CI 34,25-63,72), had completed primary education and/or incomplete secondary education (64,44%, 95% CI 49,00-77,37), and were actively employed (57,78% (95% CI 42,52-71,68). In this last regard, it is essential to note that 35,56% (95% CI 22,63-51,00) reported being unemployed.

As a highly relevant finding, 82,22 % (95 % CI 67,63-91,10) were overweight, defined as overweight or obese, values that far exceed those of the general population.

In terms of self-reported chronic diseases, a higher prevalence of high blood pressure was found (24,44 %, 11); diabetes, hypothyroidism, and osteoarthritis, all at 8,89 % (4); glaucoma, hernia (including umbilical, inguinal, and disc), and asthma, all at 6,67 % (3). Seventeen point seven eight percent (8) reported two or more diseases.

# Health-related quality of life (HRQoL) *EQ-5D-3L*

Of all possible health states according to the composite digits of the five dimensions (figure 2), ninety-one point eleven percent are explained by only five of the reported states. The best possible health state (11111) was the most prevalent (13, 28,89 %), followed by moderate impairment in the pain/discomfort and anxiety/depression dimensions (11122) (10, 22,22 %), and mild impairment in the anxiety/depression dimension (11112) (7, 15,56 %). These three states accounted for 66,67 % of the states reported by participants. Of the following most frequent states, 11113 stands out, representing being very anxious or depressed, which was reported by 11,11 % (5). The worst health state (33333) was not reported in our study. The self-care dimension was the least affected of all the dimensions studied, and the anxiety/depression dimension was the most affected (55,55 %, including both moderate and severe problems) (figure 3). In turn, if we consider the percentage of the population that reported some limitation in any domain of the EQ-5D, we observe that 71,11 % (32) of the total reported having some limitation in one or more of the five domains.

# VAS (Visual Analogue Scale)

The weighted mean VAS was 71,78 ±19,60 (range 40,0-100,0). It had a symmetrical distribution (median 70,0; interquartile range 50 to 85).

Figure 4 shows the mean and standard deviation of the VAS stratified by sex, age, formal education level, and BMI, which shows great variability. There are no significant differences between the sexes. The 18-24 age group had the highest VAS, and the 65+ age group had the lowest VAS. In terms of formal education level, those with the lowest level had the lowest VAS. Stratifying by BMI, obese individuals had the lowest VAS.

# SF36 (Health questionnaire)

	N	%	IC95%		
Sexo					
Mujer	27,00	60,00%	44,65%	-	73,61%
Hombre	18,00	40,00%	26,39%	-	55,35%
Edad en años ¹	44,89	(±14,77)			
18 - 24	3,00	6,67%	2,07%	-	19,45%
25 - 34	10,00	22,22%	12,09%	-	37,24%
35 - 49	15,00	33,33%	20,79%	-	48,78%
50 - 64	13,00	28,89%	17,21%	-	44,26%
65 y más	4,00	8,89%	3,25%	-	22,10%
IMC <sup>1</sup>	28,55	(±5,38)			
Infrapeso	-	-	-	-	-
Peso normal	8,00	17,78%	8,90%	-	32,37%
Sobrepeso	22,00	48,89%	34,25%	-	63,72%
Obesidad	15,00	33,33%	20,79%	-	48,78%
Exceso de peso (Sp+Ob)	37,00	82,22%	67,63%	-	91,10%
Situación de convivencia					
Solo	12,00	26,67%	15,46%	-	41,95%
Pareja	11,00	24,44%	13,76%	-	39,62%
Familia	22,00	48,89%	34,25%	-	63,72%
Otros	-	-	-	-	-
Nivel de instrucción formal					
Educación especial	-	-	-	-	-
Primario incompleto	9,00	20,00%	10,47%	-	34,83%
Primario completo/Secundario incompleto	29,00	64,44%	49,00%	-	77,37%
Secundario completo y/o superior	7,00	15,56%	7,38%	-	29,87%
Situación laboral Estudiante	_	_	_	_	_
Desempleado	16,00	35,56%	22,63%	_	51,00%
Trabajador activo	26.00	57,78%	42,52%	_	71,68%
Jubilado/Pensionado	3,00	6,67%	2,07%	_	19,45%
Otro	-	-	-,0.70	_	-
	1				

Figure 1. Socio-demographic characteristics of the sample. (n=45)

Estado de salud	Frecuencia absoluta	Frecuencia (%)	Frecuencia Acumulada (%)
11111	13	28,89	28,89
11112	7	15,56	44,44
11113	5	11,11	55,56
11121	6	13,33	68,89
11122	10	22,22	91,11
11222	1	2,22	93,33
21121	1	2,22	95,56
21122	1	2,22	97,78
22222	1	2,22	100,00
Total	45	100,00	

Figure 2. Prevalence of the most common health conditions and frequency of the worst possible health condition reported

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Regarding self-reported health status using the SF36, 6,67 % (95 % CI 2,07-19,45) of the population reported excellent health, 11,11 % (95 % CI 4,54-24,74) reported excellent health, and 33,33 % (95 % CI 20,79-48,78) reported good health, while 48,89 % (95 % CI 34,25-63,72) of the population reported fair or poor health.

Of the population that reported fair or poor health, women reported a higher prevalence than men (59,26 % vs. 33,33 %, respectively). Variations were also observed by age, with the 50-64 age group being the most affected; by level of formal education, with those with incomplete primary education or less being the most affected; and by BMI, with those who were obese being the most affected.

	Movilidad n (%)	Cuidado personal n (%)	Actividades cotidianas n (%)	Dolor / malestar n (%)	Ansiedad / depresión n (%)
Nivel 1: sin problemas	42 (93,30)	44 (97,78)	43 (95,56)	25 (55,56)	20 (44,44)
Nivel 2: problemas moderados	3 (6,67)	1 (2,22)	2 (4,44)	20 (44,44)	20 (44,44)
Nivel 3: problemas más graves	-	-	-	-	5 (11,11)

Figure 3. Health profiles by dimension and EQ-5D-3L level

			N	Media	DS
Sexo					
Hombre			18,00	71,39	$(\pm 16,79)$
Mujer			27,00	72,08	$(\pm 21,58)$
Edad					
18 - 24			3,00	95,00	$(\pm 8,66)$
25 - 34			10,00	78,50	(±17,96)
35 - 49			15,00	64,67	(±17,67)
50 - 64			13,00	73,08	(±31,36)
65 y más			4,00	60,00	(±14,14)
Instrucción forma	al				
Educación espe	cial		-	-	-
Primario incomp	leto		9	66,67	(±21,21)
Primario completo/Secundario incompleto			29	72,93	$(\pm 20,24)$
Secundario completo y/o superior		7	73,57	(±16,00)	
IMC <sup>1</sup>					
Infrapeso			-	-	-
Peso normal			8,00	76,88	(±19,07)
Sobrepeso			22,00	73,64	(±20,36)
Obesidad			15,00	66,33	(±18,75)
Exceso	de	peso	37.00	70.68	(±19,80)
(Sp+Ob)			57,00	10,00	(±13,00)

Figure 4. EVA by gender, age, formal education, BMI. (n=45)

			% (IC 95%)
Total			48,89 (34,25-63,72)
Sexo			
Hombre			33,33 (15,06-58,51)
Mujer			59,26 (39,42-76,48)
Edad			, , , , ,
18 - 24			33,33 (02,37-91-13)
25 - 34			30,00 (09,00-65,00)
35 - 49			53,33 (27,97-77,09)
50 - 64			61,54 (32,61-84,10)
65 y más			50,00 (08,89-91,11)
Instrucción formal			, , , , ,
Educación especial			-
Primario incompleto			77,78 (38,67-95,10)
Primario completo/Secundario incompleto			44,83 (27,42-63,60)
Secundario completo y/o superior			28,57 (06,08-71,20)
IMC <sup>1</sup>	•		, , , , ,
Infrapeso			-
Peso normal			25,00 (05,43-65,94)
Sobrepeso			50,00 (29,33-70,67)
Obesidad			60,00 (33,31-81,83)
Exceso	de	peso	, , , , ,
(Sp+Ob)		•	54,05 (37,48-69,77)

Figure 5. Regular or poor general health by sex, age, formal education, BMI. (n=45)

### **DISCUSSION**

According to the results of this study, the majority of the population of Villa Piletones reported that their general health was fair or poor (48,89 %) according to the SF-36, similar values to those reported in the ENFR 2018, where 20,9 % of the population reported that their general health was poor or fair. (7)

In the EVA, the majority of the population considers that, on a scale of 0 to 100, their health is around 71,78 points, a value similar to that of the Chilean population, which has 73,0 points, and the general population of Argentina, which obtained 75 according to the atlas.

Given that the EQ5D-3L has been classified as a generic instrument for measuring HRQoL, it is possible to say that the population studied in this study has good HRQoL, with the best possible health status 11111 being the most prevalent.

Notably, 91,11 % of the population reported their current health status in only 5 of the 243 possible states obtained with the EQ5D-3L. As relevant findings of this study, the most frequently reported alterations by respondents were the presence of moderate pain or discomfort and anxiety/depression, followed by being moderately distressed/depressed. This contrasts with the 4th ENFR, which yielded the following results: some mobility problems, 12,1 %; some problems with personal care, 2,9 %; some problems with performing daily activities, 7,2 %; pain or discomfort, 25,6 %.<sup>(7)</sup>

At the general population level in Argentina, the percentage of people reporting some limitation in any of the EQ-5D domains varied significantly; in the case of personal care, 97,1 % of the population reported no limitations, as evidenced in Villa Piletones, which was the least affected dimension. (8)

Comparing the most affected dimension at the general population level in Argentina, in the Pain/Discomfort domain, only 69,1 % were in optimal conditions. As observed in Piletones, the anxiety/depression dimension was the most affected, highlighting the need to implement health policies aimed at improving mental health. There were no significant alterations in the rest of the domains.<sup>(8)</sup>

This study also revealed that young adults have a better perception of their HRQoL than older adults. For most conditions common to these groups, adults aged 65 and over were assigned lower average values than the 18-24 age group. This is similar to the general population and also to the ENFR, where the youngest reported the lowest value (9,3%) and older adults the highest (35,8%).

It is also evident that, in terms of formal education, low levels of schooling are a determining factor in the perception of CVRS both in the population of Villa Piletones and in the general population according to the ENFR; people in these circumstances consistently assigned a lower value to their health than those with higher levels of education.

It is important to note that 35,56 % (95 % CI 22,63-51,00) reported being unemployed, which is much higher than the average for the general population. Poverty is one of the variables that can affect HRQoL.

In turn, and as a highly relevant finding, 82,22 % (95 % CI 67,63-91,10) were overweight, defined as overweight or obese, with values that far exceed those of the general population, even though an increase in overweight and obesity was observed throughout the four editions of the ENFR. What we can highlight in this study is that, when stratified by BMI, people with obesity had the lowest EVA. As previously described, obesity is an individual variable that can affect HRQoL, highlighting the need for nutrition education and monitoring by the resources available to this population.

Compared to the global literature, most of this study's findings are comparable to the results of more recent studies that have followed similar strategies for measuring and assessing health, such as studies in Colombia and Chile. (5,11)

In Colombia, the presence of "moderate pain or discomfort," followed by "moderate distress or depression," were the most frequent alterations. Young adults rate their health better than older adults, similar to this study. (5)

Similar trends were found in the study conducted in Chile, where the population studied was more affected in the dimensions of pain/discomfort and anxiety/depression. (11)

In terms of health status assessment by VAS, the results in the Colombian population were higher than those in Villa Piletones, by around 80 points. It was also observed that women consistently assigned lower values to their HRQoL than men, a finding similar to that of the general population in Argentina. (5,8)

Studies conducted in Chile and Colombia agree that health status is rated higher among people with a higher socioeconomic status, consistent with the findings in the Villa Piletones population. Another consistent finding across the different studies is the higher value assigned in the EVA to the EQ5D health states among those with some form of education compared to those without. (5,11)

## **CONCLUSIONS**

Based on the results obtained in this study, the population of the Villa Piletones neighborhood has a good health-related quality of life. However, through the SF36, most respondents reported that their health status was fair and poor. The most affected dimensions were moderate impairment in the pain/discomfort and anxiety/depression dimensions, followed by moderate impairment in the anxiety/depression dimension. There

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is a clear need to implement strategies in this population to improve education, poverty, healthy eating, and mental health, as these are all determinants of health-related quality of life.

### Limitations and biases

One of the main limitations of this study was obtaining an accurate population figure for Villa Piletones. The latest information available comes from the 2022 census, which reflected population data grouped by entire municipality. Villa Piletones belongs to Municipality 8, which comprises the neighborhoods of Villa Soldati, Villa Riachuelo, and Villa Lugano.

Some of the variables in the study, such as "height" and "weight," were not measured directly but self-reported by each participant. This could have led to recall and/or memory biases.

The participants attended the health clinic and the "Los Piletones" soup kitchen. This could represent a selection bias. Despite this, it is estimated that the sample should be representative, as a large part of the population of Villa Piletones frequents both sites.

The results presented in this study should be interpreted with caution. Due to a lack of resources, the planned sample size could not be achieved.

Among this study's strengths is that it was the first time that the health-related quality of life of the population of Villa Piletones was studied. Based on the information generated in this study, more accurate health strategies can be created and targeted at the weaknesses identified. This way, efforts, and economic resources can be focused more efficiently based on actions that promote and prevent health in this population.

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# **FINANCING**

None.

# **CONFLICT OF INTEREST**

Authors declare that there is no conflict of interest.

# **AUTHORSHIP CONTRIBUTION**

Conceptualization: Erica Maria Magalhaes de Paiva, Facundo Juan Manuel Correa. Data curation: Erica Maria Magalhaes de Paiva, Facundo Juan Manuel Correa. Formal analysis: Erica Maria Magalhaes de Paiva, Facundo Juan Manuel Correa.

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