Esc Anna Nery 2025;29:e20250087

SPECIAL ISSUE

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Quality of life in older adults: cross-sectional analysis from the perspective of complex thinking[a]

Qualidade de vida de idosos: análise transversal sob a perspectiva do pensamento complexo

Calidad de vida de las personas mayores: análisis transversal desde la perspectiva del pensamiento complejo

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Submitted on 06/23/2025.
Accepted on 12/28/2025.

DOI:https://doi.org/10.1590/2177-9465-EAN-2025-0087en

Abstract

Objective: to analyze the quality of life (QoL) of older adults and discuss the interdependent and nonlinear dynamic relationships among biopsychosociocultural factors in the light of complex thinking.

Method: quantitative, observational, cross-sectional, and descriptive study approved by the Research Ethics Committee, conducted between June and July 2023, with 209 older adults from a university social center. The WHOQOL-OLD scale and a sociodemographic and clinical questionnaire were used. Descriptive analysis was performed in Microsoft Excel in the light of complex thinking.

Results: most participants were women (89.47%), aged 70 to 79 years (47.84%), and had a good self-perception of QoL (57.89%). The "autonomy" facet showed the highest mean score (81.58), while "death and dying" had the lowest (69.89). The satisfactory perception of QoL in old age reflects a dynamic articulation between facets and sociodemographic variables throughout life, evidencing interdependence and feedback in its nonlinear nature.

Conclusion and implications for practice: it is evident that QoL is a multidimensional and dynamic phenomenon whose dimensions interact and continuously reorganize. Integrated and individualized approaches, guided by holism, flexibility, and comprehensiveness of actions at all levels of health care, are essential to promote healthy aging and satisfactory QoL in old age.

Keywords: Senior Centers; Nonlinear Dynamics; Aged; Quality of Life; Health.

Resumo

Objetivo: analisar a qualidade de vida (QV) de pessoas idosas e discutir as relações interdependentes e dinâmicas não lineares entre os fatores biopsicossocioculturais à luz do pensamento complexo.

Método: estudo quantitativo, observacional, transversal e descritivo aprovado pelo Comitê de Ética em Pesquisa, realizado entre junho e julho de 2023, com 209 idosos de um centro de convivência universitário. Utilizou-se a escala WHOQOL-OLD e um questionário sociodemográfico e clínico. A análise descritiva foi feita no *Microsoft Excel* à luz do pensamento complexo.

Resultados: a maioria dos participantes era mulher (89,47%), com 70 a 79 anos (47,84%) e autopercepção de QV boa (57,89%). A faceta "autonomia" apresentou maior média (81,58), e "morte e morrer", a menor (69,89). A percepção satisfatória da QV na velhice reflete uma articulação dinâmica entre as facetas e as variáveis sociodemográficas no curso da vida, evidenciando interdependência e retroalimentação em sua natureza não linear.

Conclusão e implicação para a prática: evidencia-se que a QV é um fenômeno multidimensional e dinâmico, cujas dimensões interagem e se reorganizam continuamente. Abordagens integradas e individualizadas, pautadas no holismo, flexibilidade e abrangência das ações em todos os níveis de atenção à saúde, são essenciais para promover o envelhecimento saudável e QV satisfatória na velhice.

Palavras-chave: Centros Comunitários para Idosos; Dinâmica não Linear; Idoso; Qualidade de Vida; Saúde.

Resumen

Objetivo: analizar la calidad de vida (CV) de las personas mayores y discutir las relaciones interdependientes y dinámicas no lineales entre factores biopsicosocioculturales a la luz del pensamiento complejo.

Método: estudio cuantitativo, observacional, transversal y descriptivo, aprobado por el Comité de Ética en Investigación, realizado entre junio y julio de 2023 con 209 personas mayores de un centro de convivencia universitario. Se utilizó la escala WHOQOL-OLD y un cuestionario sociodemográfico y clínico. El análisis descriptivo se realizó en Excel a la luz del pensamiento complejo.

Resultados: la mayoría de los participantes eran mujeres (89,47%), de 70 a 79 años (47,84%) y con autopercepción de buena CV (57,89%). La faceta "autonomía" presentó la media más alta (81,58) y "muerte y morir" la más baja (69,89). La percepción satisfactoria de la CV en la vejez refleja una articulación dinámica entre facetas y variables sociodemográficas a lo largo de la vida, evidenciando interdependencia y retroalimentación en su naturaleza no lineal.

Conclusión e implicación para la práctica: se evidencia que la CV es un fenómeno multidimensional y dinámico, cuyas dimensiones interactúan y se reorganizan continuamente. Enfoques integrados e individualizados, basados en el holismo, la flexibilidad y la amplitud de las acciones en todos los niveles de atención de la salud, son esenciales para promover un envejecimiento saludable y una CV satisfactoria en la vejez.

Palabras clave: Centros para Personas Mayores; Dinámicas no Lineales; Anciano; Calidad de Vida; Salud.

INTRODUCTION

Given the increase in life expectancy, reaching old age with a satisfactory quality of life (QoL) and experiencing healthy aging is a complex process, which demands greater attention from health professionals and public policy managers.[1] QoL is defined by the World Health Organization (WHO) as an individual's perception of their position in life, considering the cultural context and the value systems in which they are embedded, as well as their goals, expectations, standards, and concerns.[2]

In the scientific literature, an improvement in the QoL of older adults who attend senior centers is observed, especially due to several benefits related to their well-being, which contribute to greater autonomy, independence, and social interaction.[3-5]

In Brazil, senior centers play an important role in addressing challenges related to population aging by contributing to socialization, physical and cultural activities, preventing social isolation, and improving QoL, in addition to relieving pressure on health systems and promoting the continued active participation of older adults in society.[3]

However, there is a gap in knowledge about the dynamic connections and interrelationships between the factors that influence QoL in old age.[6,7] Although the World Health Organization Quality of Life Assessment for Older Adults (WHOQOL-OLD) is widely used in studies on the QoL of older adults, there is a lack of research that articulates QoL with theoretical frameworks capable of understanding the dynamic and non-linear interrelationships between the multiple factors that constitute it.[8-10] This study seeks to contribute to addressing this gap by integrating the framework of complex thinking into the analysis of the facets of QoL assessed by the WHOQOL-OLD, recognizing the interdependence between autonomy, sensory abilities, social participation, past, present and future activities, intimacy, and the domain of death and dying. This theoretical-methodological articulation proposes a systemic, relational, and non-linear reading of the QoL of older adults attending a university community center.

QoL is a multifaceted construct, influenced by several factors. A holistic understanding of QoL in older adults, combining Edgar Morin's complex thinking with the WHOQOL-OLD instrument for analyzing QoL in older adults, contributes to understanding the interdependence and non-linear dynamics between different aspects of life, enabling a deeper understanding of the multiple dimensions that affect QoL in old age.[11,12]

The application of Edgar Morin's complex thinking enables a broader understanding of the complexity of aging by exploring the dynamics between different life dimensions, favoring reflections on the importance of more integrated public policies, since these have a direct impact on health practices in all care contexts. In this sense, this article aims to analyze the QoL of older adults and discuss the interdependent relationships and non-linear dynamics between biopsychosociocultural factors in the light of the complex thinking framework.

METHODS

This is a quantitative study with a cross-sectional and descriptive design conducted from June to July 2023 at a senior citizens' center at a public university located in the city of Rio de Janeiro (RJ), Brazil. Data collection and organization were guided by the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) to ensure the transparency and quality of the findings.[13]

A quantitative approach was chosen, using the WHOQOL-OLD instrument and a structured form developed by the researchers to identify sociodemographic and clinical variables. The WHOQOL-OLD was adopted because it is a validated and widely used instrument for assessing the QoL of older adults, encompassing different dimensions of human existence. These dimensions allow us to capture the multiple nuances of life that make up the web of relationships present in a complex system, interfacing with the sociodemographic and clinical variables of the participants. This methodological choice aligns with the perspective of complex thought by enabling a systemic and relational reading of the studied reality, reinforcing the epistemological coherence between the method and the analysis.[14]

Thus, this study starts from the hypothesis that the QoL of older adults is influenced by a complex and dynamic web of biopsychosocial and cultural factors, the understanding of which can be expanded in light of Edgar Morin's complex thought.[12,15]

The sample used was non-probabilistic, with participants selected based on their availability. The population was defined based on inclusion and exclusion criteria. The inclusion criteria were: being an older adult (age ≥ 60 years, according to the Statute of the Elderly) and being enrolled in the workshops of the community center. The exclusion criteria included: impairment in the verbal expression of thought and inconsistencies in completing the WHOQOL-OLD questionnaire.

The sample size calculation was performed based on the total number of 316 older adults enrolled in the courses/workshops offered by the community center in 2023. In this way, a confidence level of 95% was considered, a sample loss of 10%, and an estimated precision of 50 ±5%, the number of participants in the sample was established at a minimum of 191 old adults.

For data collection, a self-developed form for characterizing the participants was applied, with items related to sociodemographic variables (age group, marital status, number of children, education, household arrangement, occupation, and family income), as well as the presence of comorbidities, and use of continuous medications. The WHOQOL-OLD instrument, developed by The WHOQOL Group in 1998 and transculturally adapted for Brazil in 2000, was used to analyze the QoL of older adults.[16] The instrument includes 24 questions assigned to six facets: a) Sensory Abilities; b) Autonomy; c) Past Activities, d) Present and Future Activities; e) Death and Dying; and f) Intimacy.

Participant recruitment occurred through visits to the community center during its operating hours (Monday to Friday, from 8 am to 5 pm), on days and times previously scheduled with those in charge. The principal researcher introduced herself to the older adults, explained the objectives of the research, and invited them

to participate in the study, emphasizing that participation was voluntary and the possibility of withdrawing or revoking consent at any time without penalty.

The data were analyzed using descriptive statistics, including percentages, measures of central tendency, standard deviation, coefficient of variation, as well as the minimum, maximum, and range values, with the results presented in tables. QoL was classified into four levels: needing improvement (0 to 49.9), fair (50 to 74.9), good (75 to 99.9), and very good (100), according to parameters from the literature.[17]

The data were analyzed in light of complex thinking, considering the dynamic and interdependent interactions between the facets of the WHOQOL-OLD instrument that influence the QoL of older adults.

In accordance with the recommendations contained in Resolution No. 466/2012 and Resolution No. 510/2016 of the Brazilian National Health Council (*Conselho Nacional de Saúde* - CNS), this study's design was submitted to and approved by the Research Ethics Committee (REC) with Human Beings of the institution involved, under protocol CAAE 68742123.6.0000.5282 and substantiated opinion 6.052.153. Participants were only included in the study after obtaining the signature of the Free and Informed Consent Term (FICT), in accordance with the ethical principles governing research involving human subjects.

RESULTS

The study included 209 older adults, predominantly female (89.47%) and aged between 70 and 79 years (47.84%). Most participants were married (31.57%) or widowed (27.27%), with a high level of education, with 45.93% having completed higher education and 20.09% having postgraduate degrees. It was observed that 47.84% lived alone, 75.11% were retired, and 34.44% reported a family income of five or more minimum wages. The sociodemographic and clinical characteristics of the participants are presented in Table 1.

Regarding the presence of chronic conditions, 18.18% (n=38) of older adults did not have chronic conditions, while 81.82% (n=171) reported having chronic conditions. Among those with chronic conditions, 69% (n=118) reported having one to two conditions, and 31% (n=53) reported having three or more chronic conditions. It was also found that most of the older adults participating in the study (81.4%) reported engaging in regular physical activity, while 18.6% stated that they did not engage in any physical activity.

Regarding medication use, 78.47% (n=164) of older adults used medication continuously, while 21.53% (n=45) did not use medication regularly. Regarding older adults who used continuous-use medication, 51.83% (n=85) used one to two medications, 30.49% (n=50) used three to four medications, and 17.68% (n=29) used five or more continuous-use medications.

With respect to the classification of overall QoL, the majority, 57.90% (n=121), considered it as "good", 39.23% (n=82) considered it as "fair", 1.91% (n=4) considered it as "could improve", and 0.96% (n=2) considered it as "very good". Analysis results of

Table 1. Distribution of research participants according to sociodemographic variables. Rio de Janeiro (RJ), Brazil, 2023, (N = 209).

Variable	n (%)
Sex	
Female	187(89.47)
Male	22(10.53)
Age range	
60-69	76(36.36)
70-79	100(47.85)
≥80	33(15.79)
Marital status	
Married	60(28.71)
Widowed	58(27.75)
Divorced	43(20.57)
Separated	6(2.87)
Single	39(18.66)
Common-law marriage	3(1.44)
Education	
Incomplete Elementary School	7(3.35)
Complete Elementary School	18(8.6)
Complete High School	46(22.01)
Complete Higher Education	96(45.94)
Postgraduate Education	42(20.10)
Household arrangement	
Lives alone	97(46.41)
Spouse	40(19.14)
Child(ren)	31(14.83)
Spouse and child(ren)	18(8.61)
Other family arrangements	23(11.01)
Occupation	
Retired	160(76.56)
Pensioner	4(1.91)
Self-employed	6(2.87)
Homemaker	13(6.22)
Salaried employee	26(12.44)
Family income	
≥1 to 2 minimum wages	42(20.10)
>2 to 3 minimum wages	37(17.70)
>3 to 4 minimum wages	58(27.75)
≥5 minimum wages	72(34.45)

the different facets of the WHOQOL-OLD questionnaire, as well as the overall perception of quality of life of all participants, are presented in Table 2.

Tables 3 and 4 present the analysis of QoL facets in relation to sociodemographic and clinical variables, such as age, sex, education, and regular physical activity, among others, as well as the general perception of QoL, aiming to highlight how these factors can influence different dimensions of QoL.

DISCUSSION

This study's results, interpreted in light of Edgar Morin's complex thought, proved relevant to understanding dynamic interactions between biopsychosocial factors that shape the aging experience. This thinking contributed to an integrated understanding of reality through holographic, retroactive, recursive, self-organizing, dialogical, systemic principles and the reintroduction of knowledge into all knowledge.[12,14,15,18]

By applying these principles to the analysis of the results, it was observed that each dimension of QoL is deeply interrelated, reinforcing the need for an integrated approach to understand QoL in old age holistically.

When considering the holographic principle, it was observed that the QoL of older adults is not a sum of isolated factors, but emerges from the dynamic interaction between the different dimensions evaluated, and the biopsychosocial aspects are configured and intersect over time. These variables influence each other, reflecting the non-linear dynamics of QoL, in line with the scientific literature that highlights the uniqueness and heterogeneity of each trajectory of human aging.[19]

In this context, the predominance of women, associated with: higher education, a significant presence of divorced people, better financial conditions, and the occurrence of chronic conditions, which frequently motivate the search for care, offers an opportunity to reflect on the phenomenon of the "feminization of aging" in the context of QoL, even though the perception of QoL between men and women does not present a statistically significant differences. The "feminization of aging" goes beyond a demographic dimension, configured as a complex process in which older women are simultaneously products and agents of the social and cultural dynamics that precede them and that, in turn, they transform.[20]

This scenario allows us to reflect on the transformations in gender roles and the growing social protagonism of older women, an aspect widely evidenced in the literature, which highlights the contrast with previous generations, marked by more restricted access to education and fewer possibilities of autonomy for divorce, demonstrating the social and political relevance of the advances achieved in the history of women in Brazil.[21] In light of Morin's recursive principle, individuals constitute society and, simultaneously, are transformed by it, which allows us to understand how these female trajectories reflect and feed back into cultural changes.[22] In this sense, the perception that each person has of themselves, called by Morin "consciousness of consciousness", is also formed by this exchange of influences (feedback) throughout life.[23]

Thus, the "feminization of aging" is not limited to the biological aspect but is profoundly influenced by the sociocultural context, which imposes historically constructed roles, values, and stigmas. In this scenario, specific challenges emerge resulting from social, cultural, and individual pressures that uniquely shape the experience of female aging, establishing a continuous cycle of mutual influence that affects both individual experiences and the social perception of female aging.[24,25]

Another relevant point is the predominance of older adults living alone, a finding consistent with the scientific literature.[26] The autonomy preservation in the context of "living alone" in old age raises reflections on possible practical, social, and affective challenges, especially considering the regular score observed in the "intimacy" facet and the proportion of widowed, divorced, or separated older adults evidenced in the research.

From the perspective of the dialogical principle of complex thought, this experience can, simultaneously, express freedom and isolation, revealing independence and vulnerability. Furthermore, the regular score observed in the "past, present, and future activities" facet suggests that "living alone" may be associated with choices and experiences throughout life that have shaped

Table 2. Distribution of transformed QoL scores of older adults in the six facets, WHOQOL-OLD. Rio de Janeiro (RJ), Brazil, 2023, (N= 209).

FACETS	MEAN ±SD	COEFFICIENT OF VARIATION	MINIMUM VALUE	MAXIMUM VALUE	RANGE
Sensory Abilities	81.13±18.31	22.57	18.75	100.00	81.25
Autonomy	81.58±17.00	20.84	25.00	100.00	75.00
Past, present, and future activities	74.64±16.06	21.52	18.75	100.00	81.25
Social participation	75.45±17.31	22.95	0.00	100.00	100.00
Death and dying	69.89±23.58	33.74	0.00	100.00	100.00
Intimacy	74.67±17.29	23.16	0.00	100.00	100.00
Overall quality of life	76.23±12.16	15.95	38.54	100.00	61.46

Table 3. Description (mean ± SD) of WHOQOL-OLD facet values according to sociodemographic and clinical variables. Brazil. Rio de Janeiro, 2023, (N= 209).

Facets of the WHOQOL-OLD Questionnaire (MEAN ±*SD)						
Variables	**SA**	**AUT**	**PPF**	**SOP**	**DAD**	**INT**
Sex						
Female	81.05±18.52	81.42±16.78	74.73±16.25	75.40±17.51	69.42±24.08	74.13±17.15
Male	82.10±18.61	79.55±18.10	72.44±18.10	73.01±17.51	70.03±23.72	75.43±17.34
Age						
60 to 69	83.22±16.62	83.96±14.37	73.93±14.01	72.37±16.81	68.09±23.04	75.49±16.45
70 to 79	81.94±18.09	79.75±18.49	73.75±16.74	75.50±18.41	69.00±25.36	74.44±16.57
≥80	73.86±21.28	81.63±17.67	78.98±18.07	82.39±12.83	76.70±17.97	73.48±21.37
Family Income						
≥1 to 2 minimum wages	77.98±18.79	79.46±17.15	69.79±16.96	74.26±19.34	69.35±25.03	73.51±17.83
>2 to 3 minimum wages	77.03±20.36	77.53±20.12	75.84±14.14	74.83±13.70	70.78±23.85	72.64±21.57
>3 to 4 minimum wages	79.85±20.75	85.67±13.80	78.45±14.68	77.69±15.76	73.38±21.61	76.40±16.72
≥5 minimum wages	86.11±13.48	81.60±17.14	73.78±16.97	74.65±19.02	66.93±24.18	75.00±15.06
Education						
Incomplete Elementary School	65.18±13.91	67.86±22.08	71.43±16.48	66.07±23.06	76.79±15.19	63.39±31.55
Completed Elementary School	78.82±21.45	74.65±20.95	68.75±17.68	73.61±15.98	71.18±25.29	75.00±17.55
Completed High School	78.67±20.05	79.08±18.12	70.92±15.88	76.36±15.36	68.89±22.99	73.37±16.16
Completed Higher Education	83.92±16.79	83.53±15.45	75.07±16.46	74.22±19.01	68.42±25.02	75.46±17.38
Postgraduate Education	81.10±17.81	85.12±14.74	80.80±12.76	79.61±14.22	72.62±21.65	76.04±15.18
Chronic Conditions						
No chronic conditions	82.57±19.18	84.38±17.36	77.14±16.65	75.82±19.40	78.29±22.22	78.13±18.76
1-2 chronic conditions	81.46±17.98	81.30±17.01	76.06±13.71	77.33±15.02	69.01±24.82	74.21±16.09
≥3 chronic conditions	79.36±18.65	80.19±16.79	69.69±19.43	70.99±19.88	65.80±20.42	73.23±18.77
Physical Activity						
Practices	82.21±18.08	82.35±16.74	75.37±15.82	76.76±16.64	68.75±23.95	75.85±16.00
Does not practice	76.44±18.83	78.21±17.90	71.47±16.89	69.71±19.16	74.84±21.48	69.55±21.56

Note:
*SD: Standard deviation. Fem: Female. Masc: Male. SA: Sensory Abilities. AUT: Autonomy. PPF: Activities.

the past, impact the present, and influence the future, although such relationships still require further investigation.[15]

In addition to experiences related to living alone, the higher educational level observed in most participants shows how individual resources accumulated throughout life can enhance autonomy and well-being. In light of the recursive principle, higher education may have contributed to access to information, better income, and health resources, reflecting in a positive self-perception of QoL. Considering the retroactive principle, access to knowledge influences decisions and behaviors, generating positive effects on autonomy and health management. This process, in turn, feeds back into the ability to identify and use care resources, configuring a continuous cycle of strengthening QoL.[12]

In this way, a continuous feedback loop is established, in which education, autonomy, and engagement with one's own health mutually reinforce each other. Furthermore, the literature shows that socioeconomic factors, such as education and income, are closely associated with living conditions and knowledge about

Table 4. Description (mean ± SD) of WHOQOL-OLD overall QoL scores according to sociodemographic and clinical variables. Brazil. Rio de Janeiro, 2023, (N= 209).

WHOQOL-OLD Overall Quality of Life	
Variables	**(MEAN ±*SD)**
Sex	
Female	76.02±12.18
Male	75.43±12.19
Age	
60 to 69	76.18±11.96
70 to 79	75.73±12.79
≥80	77.84±10.77
Family Income	
≥1 to 2 Minimum Wages	74.06±13.33
>2 to 3 Minimum Wages	74.77±13.04
>3 to 4 Minimum Wages	78.57±11.54
≥5 Minimum Wages	76.35±11.35
Education	
Incomplete Elementary Education	68.45±8.15
Completed Elementary Education	73.67±12.53
Completed Secondary Education	74.55±12.82
Completed Higher Education	76.77±12.38
Postgraduate Education	79.22±10.64
Chronic Condition	
No Chronic Condition	79.39±10.73
1-2 Chronic Conditions	76.56±11.39
≥ 3 Chronic Conditions 73.21±14.17	
Physical Activity	
Practices	76.88±11.57
Does not practice	73.37±14.25

Note:
*SD: Standard deviation.

social rights, including health, leisure, and housing, reinforcing the interdependence between individual and contextual aspects in shaping QoL.[27]

These factors are also influenced by public policies, environmental conditions, social support, life experiences, and health conditions, which together shape the individual perception of QoL and well-being, as verified in the literature.[23] This dynamic demonstrates that everything is interconnected and, therefore, each component of this system, that is, of this individual (such as educational level, autonomy, and socioeconomic status, among others), acts simultaneously as cause and effect, reflecting the totality of the system. In this way, the living conditions and behaviors of individuals are influenced by the social and historical context in which they are embedded, while at the same time exerting an impact on this context, generating a dynamic and interdependent relationship.[12]

The prevalence of older adults with chronic conditions using continuous medication, observed in this research, highlights the interdependence between the different domains of QoL. In light of the holographic principle, the presence of a chronic condition is not limited to an isolated physical aspect, but has repercussions on dimensions such as "past, present, and future activities", "autonomy", "social participation", and "death and dying".[14]

The way an older adult manages their chronic condition expresses a continuous process of self-care, which is built from past experiences, present practices, and projections for the future. This management influences autonomy by impacting the degree of independence in daily activities and has repercussions on social participation, by favoring or limiting social engagement. Moreover, the way a person deals with their condition affects how they attribute meaning to finitude. Thus, each of these dimensions reflects the whole of existence, in which body, mind, and social context intertwine circularly and dynamically.[28]

Regarding the prevalence of regular physical activity among the study participants, we observed, according to the feedback principle, that the continuous adoption of healthy habits among older adults contributes to the maintenance of general health and autonomy. As observed in the literature, regular exercise not only improves the physical and mental condition of older adults but also helps control existing chronic conditions, reducing the need for medication.[29] This process creates a continuous feedback loop of benefits, even encouraging the maintenance of an active life through regular physical activity.[15,19]

The systemic principle involves understanding QoL from both its parts, that is, self-assessment based on the six facets of the WHOQOL-OLD questionnaire and all the dimensions that make up QoL, as well as the overall perception of this QoL, which is the result of the interaction between these parts. When these parts are organized, the resulting whole may present new characteristics, which Morin calls emergencies, which would not be perceived when analyzing each part in isolation.[15,22]

Overall QoL, perceived as satisfactory, is reflected in an integrated way in the facets of autonomy, sensory abilities, and social participation, demonstrating that these elements are interrelated and mutually reinforcing. This finding suggests that study participants recognize themselves as subjects capable of managing their own lives, preserving independence in daily activities, and maintaining social ties, highlighting that the positive perception of QoL is the result of a complex system in which each dimension contains and reflects the whole experience of aging.[14]

In contrast to the findings in the literature, this study's results revealed that older adults aged 80 or older have a more positive overall perception of their QoL when compared to older people aged 60 to 69 and those aged 70 to 79. This age group also demonstrated a more positive self-perception in the facets

"past, present, and future activities", "social participation", and "death and dying".[30]

The positive perception of QoL among people aged 80 or older observed in this research may be related to the coping strategies these people have developed throughout their lives, that is, to their degree of resilience in the face of adversity. Being resilient in the face of life's challenges expresses the principles of self-organization and self-eco-organization, as resilient older adults tend to reorganize themselves and, in doing so, adapt to changes that occur throughout life.[19,31]

The "autonomy" facet obtained the highest score among the participants in this study, followed by the "sensory abilities" and "social participation" facets, demonstrating a positive capacity of older adults in managing their own lives, which is associated with better QoL in older adults who attend senior centers.[4]

Positively perceived autonomy is both influenced by and influences a range of aspects and dimensions of life, such as social participation and sensory abilities.[32,33] In other health service contexts, autonomy is often perceived negatively, which highlights the importance of senior centers in maintaining health and well-being in old age.[34] Autonomy contributes to the older adults' ability to participate in social activities, and participation in these activities reinforces their autonomy, creating a positive and continuous cycle where one reinforces the other (feedback).[19,35]

The regular score observed in the "intimacy" facet, when related to sociodemographic data, highlights the complexity of human relationships in old age, marked by tensions between closeness and affective distance. This dynamic manifests the dialogical principle, based on interactions between marital bonds and ruptures resulting from widowhood or divorce, which influence the formation of household arrangements throughout life, and the prevalence of older adults living alone. This scenario configures a space of interaction between order and disorder, stability and instability, in which affective bonds are continuously reorganized, expressing the adaptive capacity of older adults facing self-organizing processes.[15]

When considering the systemic and dialogical principle, the low score and the greater standard deviation observed in the "death and dying" facet express a significant variability in the responses, revealing the complexity of feelings and expectations surrounding the end of life, a finding also evidenced in the scientific literature.[34] This dimension reflects the tension between fear and acceptance, the anguish in the face of the end, and, at times, the search for transcendence. This dynamic is linked to the facet with the second lowest score, "past, present, and future activities", which influences the perception of the end of life by promoting reflections on the meaning of existence.

The principle of reintroduction of knowledge into all knowledge, in turn, highlights that all knowledge is a reconstruction made by someone embedded in a specific cultural and historical context.[18] Thus, the self-perception of QoL in older adults must be constantly revisited, as human beings are always in a process of self-organization, that is, continuously adapting as new life perspectives and health practices emerge. In this context, becomes essential to reassess, restore, and reframe this perception, considering the various dimensions of life, such as health conditions, personal motivation, and social support. This continuous reintroduction allows for a deeper and more integrated analysis of people's behavior and how these factors interact to influence their perception of QoL.[14]

In the field of health, complex thinking manifests itself at various levels: in the individual, as a living organism interacting with the environment and the health system, and in the dynamics between order, disorder, and organization. This study hypothesizes that the QoL of older adults results from the complex interaction between orderly and disorderly phenomena, which, although initially appearing chaotic, prove essential for achieving and maintaining a dynamic balance and the organization of the very dynamics of life.[36]

CONCLUSION AND IMPLICATIONS FOR PRACTICE

This study's findings contribute to a broader understanding of QoL in old age, highlighting it as a complex and interdependent phenomenon, consisting of dimensions that interact with each other and are continuously reorganized over time, in which preserved autonomy is an essential component for well-being at this stage of life.

This dynamic expresses aging as a heterogeneous and complex process, traversed by singularities involving sociocultural contexts and daily choices, reflected in the past, present, and future activities and projections of each individual. Coping with stressors, such as ruptures of affective bonds and concerns about finitude, is integrated into this continuous movement of articulation and feedback between the different spheres of life, composing the dynamic fabric of existence in its totality and particularities.

In short, this study highlights the need for integrated and individualized approaches, based on holism, flexibility, and comprehensiveness of actions at all levels of health care, to promote healthy aging and satisfactory QoL in old age. Understanding the interrelationships between the multiple factors that make up the experience of aging allows for the development of effective care strategies aimed at strengthening autonomy, social engagement, and well-being, respecting the uniqueness of each individual's life trajectory.

As a limitation, the exclusive use of the WHOQOL-OLD instrument, which, although robust and widely recognized, can restrict the understanding of subjective and contextual aspects that make up QoL. Thus, it is suggested that future research articulate quantitative and qualitative approaches in order to integrate indicators and experiences under a complex perspective, capable of revealing the interdependence between the objective and subjective dimensions of aging. In this sense, it becomes relevant to deepen investigations into the process of dying and death, considering the role of psychological support as a resource for dealing with concerns and the meanings attributed to finitude.

ACKNOWLEDGMENTS

No acknowledgments.

FINANCIAL SUPPORT

This work was carried out with the support of the *Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro* – Brazil (FAPERJ), through a scholarship granted by the *Programa Doutorado Nota 10*-Brazil (BR) - Process No. 201.689/2025.

DATA AVAILABILITY RESEARCH

The contents underlying the research text are included in the article.

CONFLICT OF INTEREST

None.

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ASSOCIATED EDITOR

Márcia de Assunção Ferreira

SCIENTIFIC EDITOR

Marcelle Miranda da Silva

[a]Extracted from the thesis: "Enfrentamento de estressores adotado por pessoas idosas no curso da vida: um estudo misto a luz do pensamento complexo e do Modelo dos Sistemas de Neuman", to be presented to the Postgraduate Program in Nursing, *Universidade do Estado do Rio de Janeiro*, Rio de Janeiro, in 2026.