Quality of life in elderly people with diabetes mellitus and systemic arterial hypertension

Qualidade de vida em idosos com diabetes mellitus e hipertensão arterial sistêmica

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Abstract

Background: Systemic arterial hypertension (SAH) and diabetes mellitus (DM) are grievances that are sensitive to the measures of promotion and prevention; however, they interfere with the quality of life (QL). **Objective:** The aim of this study was to evaluate the QL in elderly people with SAH and DM and compare their impact on the QL of these groups. **Method:** It was used as a methodology a sectional, domiciliary-based study in which the data were collected using a questionnaire with sociodemographic information, clinical and QL, through the WhoQol-Bref and analyzed in the SPSS software. **Results:** A total of 498 elderly people were evaluated, of whom 9.64% had DM, 53.21% had SAH, and 37.15% had both diseases. The majority were women (66.9%), from 60 to 69 years old (49.4%), mixed race (61.6%), from 9 to 11 years of study (53%), family budget under two minimum wages (48.6%), married (52.8%), and using five or more medications (18.9%). There was a difference among the groups (SAH, QL, or both) in the physical domain (p=0.003) and in the social relationships (p=0.017). In the physical domain, the post hoc tests showed better QL in SAH groups compared to the others. **Conclusions:** The patients with SAH showed better general QL. The psychological domain was the least affected and the environment domain was the most affected.

Keywords: quality of life; aged; hypertension; diabetes mellitus.

Resumo

Introdução: Hipertensão (HAS) e diabetes *mellitus* (DM) são agravos cujo controle é sensível a medidas de promoção e prevenção, no entanto interferem na qualidade de vida (QV). **Objetivos:** Avaliar a QV em idosos com HAS e DM e comparar o impacto na QV entre esses grupos. **Método:** Utilizou-se como metodologia um estudo seccional de base domiciliar, cujos dados foram coletados por meio de questionário com informações sociodemográficas, clínicas e de QV, por meio do WhoQol-Bref, e analisados por meio do software SPSS. **Resultados:** Foram avaliados 498 idosos, 9,64% com DM, 53,21% com HAS e 37,15% com ambos os agravos. A maioria era mulher (66,9%) entre 60 e 69 anos (49,4%), parda (61,6%), com nove a doze anos de estudo (53%), renda familiar abaixo de dois salários mínimos (48,6%), casada (52,8%) e 18,9% era polifármaca. Houve diferença entre os grupos (HAS, DM ou ambos) no domínio físico (p=0,003) e relações sociais (p=0,017). No domínio físico os testes *post hoc* apontaram melhor QV no grupo HAS em relação aos demais (p<0,05). **Conclusões:** Os pacientes com HAS apresentaram melhor QV geral. O domínio psicológico foi o menos afetado, e o domínio meio ambiente, o que mais sofreu impacto.

Palavras-chave: qualidade de vida; idoso; hipertensão; diabetes mellitus.

INTRODUCTION

In 2016, the life expectancy while born passed to 75.8 years old in Brazil. In 1940, it was 45.5 years old, and in 2000, it had reached 70.46 years old. During the past decade, there was an increase of slightly more than 3 years old. Overcoming the risk of death and surviving until 40 years old in 2016, Brazilian people would have a medium life expectancy of over 39.1 years old, reaching 79.1 years old[1]. Until 2025, Brazil will be the sixth country with better longevity in the world, and this perspective must be accompanied by the maintenance of life conditions and quality of life (QL)[2].

Basic questions for healthy aging include healthier habits in all phases of life. In other words, activities, which are known as factors of health promotion, such as physical exercise, leisure, access to healthy food, and cessation of smoking, must be done regularly in all phases of life[2]. Having an objective to increase the probability of aging with substantial gains in QL, the focus cannot only be the obstacles but also the opportunities during the whole life to have better chances of oldness with dignity[3].

The World Health Organization[4] (WHO) defines QL as the "individual perception, of the own life position, in a context of culture and values systems in which the individual lives and in relation to the individual's objectives, expectations, patterns, and worries". In a certain way, the loss of QL is strongly associated with changeable factors but not specifically with the presence or absence of a disease. The WHO points out that social health determination plays a central role in this modern world due to questions related to the fact that the biggest part of diseases happens because of the conditions people were born, live, work, and age, a group of factors known as social determinants of health, which include social, economic, political, cultural, and environmental determinants.

Hence, together with an increase in the number of elderly people, the societies must be prepared to realize and step in the factors that are related to QL, seeking to overcome what Willig *et al.*[5] identified as an apparent concern with the advanced longevity from the perspective of a problem to the individuals and to the societies. In contrast, they must face the longevity from the perspective of reaching this level with QL. Therefore, it is fundamental to prioritize the development of the factors that increase the probability of aging with substantial gains in QL and health.

The elderly people who keep the autonomy and do not need help or supervision to organize their daily routine, keeping physical and mental abilities to an independent life, can be considered healthy elderly people, even when they have some chronic conditions[6]. However, diabetes, hypertension, cancer, spine problems, and rheumatism are among the most common chronic conditions, affecting 52.6 million of Brazilian people in 2003, which corresponded to 29.9% of the population, of which 9.7 million had three or more concurrent diseases[1].

In 2016, 61,398 deaths were registered because of diabetes and 49,640 because of hypertensive diseases, both keeping a tendency of proportional growth in the past 10 years and representing almost 10% of the total number of deaths. Considering these grievances as risk factors for cardiovascular diseases, the main cause of death in Brazil in the past years, the proportion of deaths because of diabetes mellitus (DM) and systemic arterial hypertension (SAH) is, in fact, higher than the possible to be identified in the information health systems[7].

The DM and SAH are health grievances that are not obligatorily associated with advanced age, but they are more prevalent in this age and their geneses have a relation with social and pathological alterations, whose control is sensitive to the adoption of promotion and prevention measures, with great effectiveness in the reduction of their complications[8].

For the correct management of patients, it is necessary to have medical and non-medical treatments, characterized as a *sine qua non* condition to the correct control, although there is frequent resistance from the patients to the accomplishment. The difficulty of adhering to the medical treatment is associated with oblivion, the need to take medicines for the rest of the life, financial matters, and others. Concerning the non-medical treatment, the resistance is associated with the need of changing the habits consolidated throughout the lifetime, which are normally related to the insertion and strict control of a balanced diet and regular practice of physical exercises[9].

This study had the objective of evaluating the QL in DM and SAH patients and identifying if there is a difference in the impact of the QL on these groups, having cutoff patients accompanied by primary health care team in Manaus, Amazonas. The goal was not to evaluate the facts connected to the diseases but to compare which factors compromise the QL of these individuals with hypertension (SAH) and diabetes (DM) diagnostics, especially considering the necessities of management facing these grievances.

METHODS

Having as hypotheses the difference in QL impact among elderly people and the groups with SAH and DM, a sectional, exploratory, and household-based study was conducted with a descriptive nature in the period from 2016 to 2018 and approved by the Ethics Committee in research of Universidade do Estado do Amazonas under the statement number 1.477.911. The size of the sample was calculated, considering the value of 25 to the standard deviation score of the QL instrument, assuming one-fourth of the minimum amount and maximum of the interval (0–100), and admitting a precision of 2% and a confidence level of 95%.

The study included elderly patients, older than 60 years[10], with SAH and DM diagnosis accompanied by the Family Health Strategy, a priority program of primary health care in Brazil. The research was performed in Manaus, Amazonas, a municipality with more than 2 million inhabitants.

To collect the data, a questionnaire composed of sociodemographic information, medical history, and QL information was used. To obtain these data, the WHO QL – BREF (WhoQol-Bref) was used and validated by Fleck *et al*.[11] in Brazil, which is composed of 26 questions called facets and grouped into 4 parts called domains, regarding the physical, psychological, and social relationships and environmental aspects.

The medium score in each domain indicates the elderly people's own perception of satisfaction in those life aspects, relating them to their own QL. The facets were evaluated considering the question, which was highly correlated with the total score. It applied the syntax of the instrument to the evaluation of the general scores and domains, converted to a centesimal scale where 100 is the biggest value that corresponds to the best QL[12]. For the facets analysis, the highest value corresponds to 5.

The data collected were organized in a Microsoft Office Excel spreadsheet and exported to the SPSS, version 22 software. The individual characteristics included in the study were described through absolute and relative frequencies, whereas the general QL scores and domains of WhoQol-Bref were represented by the average, median, and standard deviation, according to the basis disease (diabetes, hypertension, or both).

A bivariate analysis was performed between the independent variable "basis disease" and the outcome "quality of life", through domains using the variance analysis. For the evaluation of the differences among the scores, the ANOVA test was used when the variances were homogeneous according to the Levene test. For the comparison among the variable groups with non-homogeneous variances, the Kruskal-Wallis test was used. Post hoc test was applied in pairs to identify which groups were different from one another.

RESULTS

A total of 498 elderly people were evaluated; among them, 9.6% had a DM diagnosis, 53.2% had SAH, and 37.1% had both grievances. The biggest part of the sample was composed of female individuals (66.9%) with the age ranging from 60 to 69 years (49.4%), with a medium age of 71 years. There was also a predominance of elderly people who declared themselves as mixed race (61.6%), from 9 to 11 years of study (53.0%), family budget under two minimum wages (48.6%), and living with partner or spouse (52.8%). Considering polypharmacy as the continuous and simultaneous use of five or more medications, 18.9% of elderly people belonged to this group (Table 1).

Elderly people with only SAH diagnosis presented higher values of the WhoQoL-Bref score in the four domains when compared to the patients with exclusively DM, associated or not

Table 1. Frequency and proportion of elderly people according to demographic, social, economic, and health characteristics, Manaus, 2018 (n=498)

Variable		Frequency	Proportion
Sex	Female	333	66.9
	Male	165	33.1
Age group (X=71.07 years)	60–69	246	49.4
	70–79	165	33.1
	≥80	87	17.5
Race	Mixed	307	61.6
	White	136	27.3
	Black	38	7.9
	Asian	11	2.2
	Indigenous	6	1.2
Years of study	<9	99	19.9
	9–12	264	53.0
	≥13	135	27.1
Marital status	Live with partner	258	52.8
	Do not live with partner	240	48.2
Family budget (minimum wages)	<2	242	48.6
	2–4	222	44.6
	≥4	34	6.8
Number of comorbidities	None	61	12.2
	1 or 2	193	38.8
	3 or more	244	49.0
Polypharmacy (daily ingestion)	Do not take medications	41	8.2
	<5 medications	363	72.9
	≥5 medications	96	18.9
Physical activities	Yes	116	23.3
	No	382	76.7
Basis disease	Diabetes	48	9.6
	Hypertension	265	53.2
	Both (hypertension and diabetes)	185	37.1

associated with hypertension, indicating a better general QL for the patients with hypertension. The psychological domain presented the highest grades for all the groups. On the contrary, the environmental domain presented the lowest score; thus, the facets correspondent to this domain negatively impacted the QL of the elderly people (Table 2).

The environmental domain involves aspects of security, home environment, financial resources, health care, access to information and transport, leisure opportunity, and the quality of the physical environment. Among them, those that represent the highest negative influence on the QL were the opportunity to join recreation and leisure activities, with an average close to 2.5 (+1.1) among the groups with basis diseases and financial resources with 2.7 (±0.9) (Table 3).

Table 2. QL in elderly people according to the basis disease (diabetes, hypertension, or both) through WhoQoL-Bref domains, Manaus, 2018

Domains	DM (n=48)		Hypertension (n=265)		Both (n=185)	
	X (DP)	Md	X (DP)	Md	X (DP)	Md
Physical relationship	55.06 (19.25)	51.79	61.95 (18.75)	64.29	56.47 (18.34)	57.14
Psychological relationship	64.50 (13.51)	62.50	68.41 (14.64)	70.83	66.44 (14.57)	70.83
Social relationship	62.33 (16.93)	66.67	68.18 (13.91)	66.67	64.37 (16.45)	66.67
Environmental aspects	54.36 (14.44)	56.25	57.13 (13.68)	56.25	55.56 (13.08)	59.38

Table 3. QL in elderly people according to the basis disease (diabetes, hypertension, or both) through WhoQoL-Bref facets, Manaus, 2018

Items of QL instrument	DM		Diabetes and hypertension		Arterial hypertension	
	Average	±DP	Average	±DP	Average	±DP
Physical domain						
Pain and discomfort	3.1	1.3	3.4	1.3	3.6	1.2
Energy and fatigue	3.4	1.0	3.3	1.0	3.6	1.0
Sleep and rest	3.6	1.1	3.4	1.0	3.6	1.2
Mobility	3.3	1.3	3.3	1.2	3.5	1.2
Daily life activities	3.2	1.0	3.3	1.0	3.6	1.0
Medication dependence or treatments	2.9	1.0	2.7	1.0	3.0	1.0
Capability of work	3.0	1.1	3.2	1.0	3.5	0.9
Psychological domain						
Positive feelings	3.2	0.9	3.2	1.0	3.2	1.0
Think, learn, memory, and concentration	3.4	1.1	3.4	0.9	3.6	0.9
Self-esteem	3.7	0.8	3.7	1.0	3.9	0.9
Body image and appearance	3.5	0.9	3.7	1.0	3.7	0.9
Negative feelings	3.1	1.1	4.2	0.9	4.1	1.0
Spirituality/religion/personal beliefs	3.7	0.9	3.8	0.8	3.9	0.8
Social relationship domain						
Social relationship	3.8	0.9	3.8	0.9	3.9	0.8
Social support	3.6	1.0	3.6	1.0	3.8	0.8
Sexual activity	3.2	1.1	3.3	0.9	3.4	0.9
Environmental domain						
Physical security and protection	3.7	1.0	3.7	1.0	3.8	1.0
Home environmental	3.4	0.9	3.4	0.9	3.4	0.9
Financial resources	2.9	1.0	2.7	0.9	2.8	0.9
Health and social care	3.4	1.1	3.5	1.1	3.4	1.2
Opportunity to new information/abilities	3.4	1.0	3.2	0.9	3.4	0.9
Participation/opportunity of recreation/leisure	2.5	1.1	2.5	1.1	2.6	1.1
Physical environment: (pollution/noise/traffic/weather)	3.2	0.9	3.3	0.7	3.5	0.9
Transportation	4.1	0.7	3.3	1.1	3.4	1.1

In the physical and social relationship domains, there was a great negative impact on the QL related to medication dependence, treatment, and sexual activity facets, whereas in the psychological domain, there was a high frequency of negative feelings among the elderly people with DM (score 3.1±1.1). However, among the elderly people with SAH or both grievances, the facet with the highest negative impact on the QL was the low frequency of positive feelings (score 3.2±1.0) (Table 3).

Table 4 presents the comparison among the QL domains in the groups, where it is possible to observe a meaningful difference among the groups only in the physical (p=0.003) and social relationship (p=0.017) domains. In the physical domain, the one-way ANOVA showed that there is an effect of the group on the QL of these individuals (p<0.05), whereas in the social relationships domain, the Kruskal-Wallis test was applied because of the non-homogeneous variances result in this domain, and the test also showed that there is an effect of the group on the QL (p<0.05).

Table 4. Comparison of the QL among groups of elderly people according to the basis disease through WhoQoL-Bref domains and facets, Manaus, 2018

	Significance of statistic test (ANOVA)	Basis disease		Standard error	Significance of post hoc test (Tukey's test)
Domains					
Psychological	0.137				
Environmental	0.281				
Physical	0.003	Hypertension	Diabetes	2.925	0.049
		Hypertension	Both	1.786	0.006
		Diabetes	Both	3.020	0.887
Social	0.017*	Hypertension	Diabetes	-2.388	0.051**
		Hypertension	Both	2.105	0.106**
		Diabetes	Both	-1.067	0.857**
Physical domain facets					
Pain and discomfort	0.057				
Mobility	0.140				
Sleep and rest	0.367				
Medication dependence	0.025	Hypertension	Diabetes	0.160	0.890
		Hypertension	Both	0.098	0.018
		Diabetes	Both	0.165	0.475
Energy and fatigue	0.032	Hypertension	Diabetes	0.154	0.353
		Hypertension	Both	9.094	0.032
		Diabetes	Both	0.159	0.987
Daily activities	0.004	Hypertension	Diabetes	0.154	0.046
		Hypertension	Both	0.094	0.013
		Diabetes	Both	0.159	0.802
Capability to work	0.000	Hypertension	Diabetes	0.161	0.002
		Hypertension	Both	0.098	0.013
		Diabetes	Both	0.166	0.239

*Kruskal-Wallis test; **Post hoc test non-parametric for Kruskal-Wallis, value adjusted for quantity of comparisons

For comparison in pairs, the post hoc test was applied for the couple domains, which provided meaningful results for the effect of the groups on the QL. In the physical domain, the Tukey's test showed that the QL of the group of elderly people with SAH is different from the QL of the group of elderly people with DM (p=0.049), even when the diabetes has a comorbidity of hypertension (p=0.006). Therefore, in the social relationships, the post hoc test non-parametric to Kruskal-Wallis did not present statistically meaningful difference when adjusted to the quantity of comparisons (p>0.05).

The facets of the physical domain include questions regarding, in the past 15 days, physical pain that caused discomfort and stopped the individual from daily routine, capability to move, satisfaction with the sleep, need for some medications every day, satisfaction with own capability to work, the energy for daily activities, and the capability of development of daily activities. For the facets of pain and discomfort, mobility, and quality of sleep and rest, there were no differences among the groups.

When referred to energy and fatigue (p=0.032) and the dependence of medication (p=0.025), the one-way ANOVA showed that there is a difference among the groups. Post hoc test confirmed a meaningful difference between the pairs of elderly people with SAH and DM simultaneously (p<0.005).

In the facet about the capability to perform the daily activities, the post hoc test showed that there is a difference between the group with SAH diagnosis and elderly people with diabetes (p=0.046), independent of the presence of hypertension as a comorbidity (p=0.013), although in the last group, the statistical significance is higher. When referred to the capability to work, the groups showed differences from each other (p<0.01), with higher statistical significance between hypertensive and diabetic individuals (p=0.02).

DISCUSSION

In general, the sociodemographic characteristics of the sample followed the tendencies for the composition of the elderly population[1] and other morbidity studies[6,13-15]. Concerning the QL, the environmental domain was the one that showed the lowest scores, therefore having a great influence on the loss of QL in the respective domain. In the physical domain, it was the dependence on medications and treatments; in the psychological domain, the highest prevalence of negative feelings for diabetics or the lowest prevalence of positive feelings for hypertensives; in the social relationship environment, the facet on sexual activity; and in the environmental domain, the opportunity to join leisure activities.

In the facet of dependence on medication or treatments, in the physical domain, the approach for patients' adherence to the treatment has been characterized as one of the biggest challenges to control SAH and DM in both medical and non-medical treatments. Gontijo *et al*.[16] from a household survey of elderly people in Belo Horizonte found a proportion of 24.8% of hypertensive and diabetic elderly people who stopped taking some medications, mainly because of lack of financial resources, lack of medication in the public health system, or oblivion.

According to IBGE, the expenses proportional to health in Brazilian families are similar independently of the family budget, but the biggest proportion of these resources are destined to buy these medications among the poorest, whereas, among the wealthy, they are destined to pay health insurance. Hence, the family budget is proportionally more compromised by the purchase of these medications among the poorest families[1].

The population with the lowest income depends especially on the medication distribution made by the public health units, although the discontinuance of the offer in the network of Brazil's Unified Public Health System and restrictions occurred in the Brazilian's Popular Pharmacy Program, especially because of the end of the own pharmacies in the network's program, remaining only the accredited network and making it difficult for the patients to access the medicines[17].

In this way, the result identified in this study concerning the physical domain, specifically the medication dependence, can be related to the fact that these patients live in areas of basic health units' coverage, whose family health strategy's implementation followed the guidelines established nationally, prioritizing its installation in neighborhoods of greater vulnerability

and, consequently, in neighborhoods of low schooling and low income, complicating the access to medication.

Girotto et al.[9], in a study on hypertensive people, found a proportion of 41% of elderly who had not embraced or partially embraced the medical treatment, presenting as motives the oblivion, thinking that the blood pressure was controlled or did not show symptoms, the adverse effects of the medication, besides the medication's unavailability in the health units.

Gontijo et al.[16] pointed out that the occurrence of prescription of drugs in a redundant and inappropriate way, a characteristic aspect in population that uses medications continuously and with more than one grievance, introduces even more difficulties, mainly when referring to adverse and collateral effects coming from the medical interaction, apart from the financial overload, factors that may influence these patients' QL.

It is possible to observe what was found here about the factors that influence the QL, support previous studies that pointed out difficulties related to the continuous and permanent implementation of medical treatment among patients with SAH and DM, and describe a deep analysis of the causes associated with these factors. This study points out and identifies these areas since they have impacts on the QL, whose approach must be prioritized in the public health field. Among them, we detach the need to improve the quality of the support and accompaniment of these patients in order to avoid redundant medication and the incorporation of effective management measures in the medication distribution politics capable of avoiding oscillations or occasional shortages in their offer, aiming to reduce the impacts on the QL.

These measures might also impact the financial matter, which becomes the center of the organization of the daily activities, and it is also related to other facets, such as the participation and the opportunity of leisure or recreation, which are responsible for the environmental domain to be classified as the main contributing factor in the QL's reduction. Because when financial resources restrict leisure activity, the probability of the leisure activity to be a priority is smaller, and thus the financial resource contributes to the other facets' performance.

The leisure activities, according to Ferreira and Barham[18] who termed them as pleasant activities, act as a mediator in the prevention and overcoming of psychological disorders among elderly people, helping them to deal with the negative effects of loss and contributing to the predisposition for the physical and psychological welfare. Amaral et al.[19] have found a higher prevalence of depressive disorder in hypertensive patients when compared to the general population and warned that the presence of depression may make the management of the patient difficult.

These affirmations call attention to the psychological domain, where the presence of negative feelings such as bad mood, despair, anxiety, and depression were identified as the main factors associated with the loss of QL of the individuals with DM. A grievance that causes a negative impact on an individual's biopsychosocial life has implications on their self-image, social isolation, family breakdown, and the performance of self-care actions[20]. It is possible to observe an interlacing among the facets and the necessity of looking in a full way at the individual and the context inserted.

A study carried out with hypertensive people by Cavalcante[21] referred to great dissatisfaction with the sexual QL, mainly in the group with a higher proportion of patients with more time of adherence to the treatment, and pointed out that the sexual QL might suffer under the influence of physical and psychological factors and also the medication used.

Lobo and Cândido[22] pointed out another determinant factor in this matter, the discriminatory vision of sexuality among elderly people, warning of a negative vision about the acceptance of the elderly people's full capability and the right to live their sexuality in a way dissociated from physiological factors such as the erectile dysfunction, menopause, or even chronic diseases. This limited vision hampers the progress with the need for the reconstruction of a new, own existence vision, permeated by emotional reactions focusing on the QL[20].

Vieira et al.[23] when studying the sexuality in aging, based on the theory of social representation, identified it as the essential element of a good QL whose elaboration was beyond the intercourse itself but associated with categories such as pleasure, affection, intimacy, partnership, desire, love, life, and self-esteem.

Contributing to the studies on this topic, it is possible to observe that sexuality is something inherent to the human being and may change over the years, but it is not extinguished, capable of being expressed at any stage of the life, and addressed to include elderly people as much as other age groups. However, it is possible that the sexuality denial among elderly people and even the lack of comprehension about the topic in the aging process, including among health professional groups, contribute to difficult the approach of the subject and consequently reduce the possibility of enabling the necessary support to fight the difficulties and to help living their own sexuality in a satisfactory way, reducing the negative impact on their QL.

In this way, it is important that health professionals and groups develop abilities and skills concerning sensitivity, availability, and open dialogue about sexuality, individually or collectively, making elderly people feel welcomed and uninhibited (or loosen up), demythologizing the subject, and helping to fight the difficulties that might be associated with the presence of chronic diseases and continuous use of medications.

The results point to a complex of interrelated general factors that interfere in the QL, hitting the individuals in different areas of their existence. The presence of chronic diseases makes the population group of elderly people even more vulnerable because of both the limitation imposed by the diseases and the need for continuous treatments, especially multiple drugs.

In a general way, hypertensive and diabetic patients are priority groups for public health. In Brazil, because of the impact on the health of individuals and investment in the public health system, a computerized system was created to register and monitor the patients — the HIPERDIA. Both are chronic grievances identified as the main risk factors for cardiovascular diseases and, in turn, constitute the worldwide main cause of morbimortality, although, independently of the joint approach in the scope of primary attention, this study showed that the patients with diabetes suffered a higher impact on the QL.

Matias *et al.*[24] studied that the disease burden in patients with DM is significant and when allied to changes in the lifestyle necessary to treatments such as diet restrictions and use of medications, besides the resulting complications listed among them, retinopathy, neuropathy, heart disease, neuropathic foot disease, and others, lead to less satisfaction with life.

Lower rates of QL of patients with DM are referred to in other studies[25], and the results presented here show that when compared to patients with SAH, it is also a reality in the studied population, pointing out that there was a significant difference in medication dependence, energy, and fatigue for daily activities, especially the capability to work, facets related to the individual's life addressed in the physical domain, and which were responsible for a significant difference among the elderly people with SAH and DM in this domain.

The specificity of treating the patients who live in areas covered by the primary health care network, whose approach is through the family's health strategy, has as a premise that the health professionals would assume the challenge of developing overcoming strategies for problems beyond the health area and the necessity of a different look with the assumption of recognition capability of the patients' context and life. Corrêa *et al.*[8] studied factors that affect the QL in patients with diabetes type 2 and concluded that the majority of variables that influenced the QL were changeable factors, highlighting the health education as a fundamental component in diabetes treatment.

The search for technological innovations in the approach of these patients becomes fundamental to overcome historical difficulties about non-medical and medical treatments; the last one here pointed out as one of the causes related to the loss of QL. These initiatives may find a favorable way to reduce the distance of overmedication and the iatrogenic effects resulting from them, which impact clinically and socially, interfering in life and health conditions.

It is fundamental to observe that although both grievances are of a chronic nature, clinically associated, and with high prevalence in the elderly population, they impact the QL of these individuals in different ways. The elderly people with SAH presented better QL when compared to those with DM diagnosis. The complexity and interrelation among determinant factors and/or conditioning of the process of health-disease hit in many areas of the individuals' existence, enhancing itself by some individual characteristics; however, patients with DM are suffering more intense influence on their QL.

The health family strategy responsible for accompanying these individuals in a health primary attention level might have in these results an alert reference about factors that have a greater influence on the QL of the elderly people with SAH and DM. Having it as a basis for reflection about the work process in order to increase the support for integral attention, including direct support to its own qualification, but, above all, with a look for these groups with different segments and that need differentiated attention.

The limitations of this study are associated with its own methodology, which proposes the identification and description of factors that had greater impacts on the QL, having the necessity of future studies to talk about these factors deeply to explain the causes associated with and the negative influence on the QL and define the technologies that have the potential to increase the support for these individuals group.

AUTHORS' CONTRIBUTIONS

EMC: Conceptualization, Data curation, Formal Analysis, Investigation, Methodology, Software, Writing — original draft. TCS: Data curation, Investigation, Writing — original draft. FJH: Writing — review & editing TLB: Project administration, Conceptualization, Data curation, Writing — review & editing.

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