

HEALTH LITERACY AND QUALITY OF LIFE OF OLDER PEOPLE USERS OF PRIMARY HEALTH CARE

ALFABETIZACIÓN EN SALUD Y CALIDAD DE VIDA DE LOS ANCIANOS USUARIOS DE ATENCIÓN PRIMARIA DE SALUD

LETRAMENTO EM SAÚDE E QUALIDADE DE VIDA DE PESSOAS IDOSAS USUÁRIAS DA ATENÇÃO PRIMÁRIA À SAÚDE

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Submission: 30-06-2024

Approval: 13-01-2025

ABSTRACT

Introduction: Health Literacy (HL) is associated with health care, disease promotion and prevention, and the aging process can impact the use of health services and Quality of Life. **Objective:** To evaluate the level of Health Literacy of older people using Primary Health Care and its relationship with Quality of Life. **Method:** Correlational, cross-sectional study with a quantitative approach, using the instruments *Euroqol-5 Dimensions* (EQ-5D), *European Health Literacy Survey Questionnaire short-short form* (HLS-EU-Q6) and characterization form. **Results:** Of the 100 older people evaluated, the majority were female, aged 65 to 69 years, with 12 or more years of schooling, had a per capita income of up to 1 minimum wage, had some illness and used medication. Regarding the level of HL, problematic HL was found in the sample (87%). Regarding the relationship between LS and the participants' perception of QoL, negative and statistically significant Spearman correlation coefficients were obtained with the domains mobility ($r = -0.257$), pain/malaise ($r = -0.337$) and anxiety/depression ($r = -0.312$). Furthermore, there was a positive and significant correlation with the analogue health status scale ($r = 0.377$). Conclusion: QoL and LS are correlated variables in the older population and can highlight the weaknesses of health promotion and disease prevention actions.

Keyword: Health Literacy; Quality of Life; Aged; Primary Health Care.

RESUMEN

Introducción: La Alfabetización en Salud (AS) está asociada con la atención de la salud, la promoción y prevención de enfermedades, y el proceso de envejecimiento puede impactar el uso de los servicios de salud y la Calidad de Vida. **Objetivo:** Evaluar el nivel de Alfabetización en Salud de personas mayores que utilizan la Atención Primaria de Salud y su relación con la Calidad de Vida. **Método:** Estudio correlacional, transversal, con enfoque cuantitativo, utilizando los instrumentos *Euroqol-5 Dimensions* (EQ-5D), *European Health Literacy Survey Questionnaire short-short form* (HLS-EU-Q6) y formulario de caracterización. **Resultados:** De los 100 ancianos evaluados, la mayoría eran mujeres, con edades entre 65 y 69 años, con 12 o más años de escolaridad, tenían un ingreso per cápita de hasta 1 salario mínimo, tenían alguna enfermedad y utilizaban medicamentos. En cuanto al nivel de AS, se encontró AS problemática en la muestra (87%). En cuanto a la relación entre la AS y la percepción de calidad de vida de los participantes, se obtuvieron coeficientes de correlación de Spearman negativos y estadísticamente significativos con los dominios movilidad ($r = -0,257$), dolor/malestar ($r = -0,337$) y ansiedad/depresión ($r = -0,312$). Además, hubo una correlación positiva y significativa con la escala análoga de estado de salud ($r = 0,377$). **Conclusión:** La Alfabetización en Salud y Calidad de Vida son variables correlacionadas en la población anciana y pueden resaltar las debilidades de las acciones de promoción de la salud y prevención de enfermedades.

Palabras clave: Alfabetización en Salud; Calidad de Vida; Anciano; Atención Primaria de Salud.

RESUMO

Introdução: O Letramento em Saúde (LS) está associado aos cuidados de saúde, promoção e prevenção de doenças, sendo que o processo do envelhecer pode impactar no uso dos serviços de saúde e na Qualidade de Vida (QV). **Objetivo:** Avaliar o nível de Letramento em Saúde de pessoas idosas usuárias da Atenção Primária à Saúde e sua relação com a Qualidade de Vida. **Método:** Estudo correlacional, de corte transversal com abordagem quantitativa, utilizando os instrumentos *Euroqol-5 Dimensions* (EQ-5D), *European Health Literacy Survey Questionnaire short-short form* (HLS-EU-Q6) e ficha de caracterização. **Resultados:** Das 100 pessoas idosas avaliadas, a maioria eram do sexo feminino, na faixa etária de 65 a 69 anos, com 12 ou mais anos de escolaridade, possuíam renda per capita de até 1 salário mínimo, apresentavam alguma doença e utilizavam medicamento. Com relação ao nível de LS, verificou-se na amostra LS problemático (87%). Quanto a relação entre o Letramento e a percepção da Qualidade de vida dos participantes, obteve-se coeficientes de correlação de Spearman negativos e significativos estatisticamente com os domínios mobilidade ($r = -0,257$), dor/mal-estar ($r = -0,337$) e ansiedade/depressão ($r = -0,312$). Além disso, evidenciou-se correlação positiva e significativa com a escala análogica do estado de saúde ($r = 0,377$). **Conclusão:** A QV e o LS são variáveis correlacionadas no público idoso e que podem evidenciar as fragilidades das ações de promoção de saúde e prevenção de agravos.

Palavras-chave: Letramento em Saúde; Qualidade de Vida; Idoso; Atenção Primária à Saúde.



INTRODUCTION

The epidemiological transition is a global event caused by increased life expectancy and low birth rates, resulting in an exponential growth in the number of elderly people⁽¹⁾. The 2022 Demographic Census of the Brazilian Institute of Geography and Statistics indicated that there are approximately 32 million elderly people living in Brazil, a fact that represents an increase of 56% compared to the 2010 census, with the state of São Paulo ranking 4th with the highest aging rate in 2022⁽²⁾.

In line with the definition of the World Health Organization, the Statute of the Elderly defines that, in Brazil, every individual aged 60 or over is considered an elderly person. This law also guarantees all constitutional rights of the elderly, namely: health, sports, leisure, housing and security⁽³⁾.

Given the heterogeneity of the aging process, it is not always accompanied by quality of life (QoL). Factors such as social losses, chronic diseases and reduced social support can negatively affect the QoL of elderly people⁽⁴⁾.

Quality of Life (QoL), in turn, is a broad concept defined by individuals' perception of the satisfaction of their needs, without the feeling that they are being denied opportunities to achieve happiness and fulfillment. This concept understands that individual perception is independent of physical, economic or social health conditions⁽⁵⁾.

Since the elderly population has multiple medical conditions and frequently uses health

services, such situations also require complex treatments⁽⁶⁾. Studies indicate that elderly people have low literacy^(7,8).

Health Literacy (HL) is conceptualized as the ability to access, understand, evaluate and apply information in the context of health, with the purpose of making assertive decisions about care, prevention and health promotion⁽⁹⁾. Above all, HL is a concept related to QoL, based on the understanding that the first variable can affect the use of health services, drive the prognosis of diseases and modify hospitalization rates⁽¹⁰⁾.

It should be considered that HL is an essential tool for the development of self-care and adherence to health treatments. Based on this, it is essential that the health professional perceives the level of HL of individuals, stratifying them into the categories of problematic, inadequate and sufficient HL, as some elderly people may require greater assistance in interpreting health instructions, thus providing equitable and unique care^(10,11).

In this scenario, Primary Health Care (PHC) is considered the gateway to the Unified Health System (SUS), configuring itself as an essential space to address HL, in addition to being the initial access for care and screening of diseases, comorbidities and frailties of individuals. The National Health Policy for the Elderly (PNSPI), established in 2006, aims to recover, maintain and promote the autonomy and independence of the elderly, using PHC to implement this strategy^(12, 13, 14).



From this, it is observed that health professionals have a relevant role in maintaining the QoL and the HL level of the population enrolled in PHC, because health promotion and disease prevention activities must be designed in an attempt to provide QoL by increasing health information, thus generating greater knowledge and breadth of HL rates⁽¹⁵⁾. The literature also indicates that a low level of HL can interfere with the subject's autonomy and alter the resolution of PHC^(16, 17).

Therefore, it is essential to assess HL in elderly people, since factors such as low education level and cognitive deficits can be a challenge when communicating with this group⁽⁶⁾, resulting in a lack of understanding of information⁽⁷⁾.

The objective of this research was to assess the level of Health Literacy of elderly people using Primary Health Care and its relationship with Quality of Life.

METHODS

This is a correlational, cross-sectional study with a quantitative approach.

The sample for this study consisted of 100 elderly individuals who attend the São José Basic Health Unit (UBS) - "Dr. Luiz Valente de Oliveira", located in the interior of the state of São Paulo. The inclusion criteria were being 60 years of age or older and being a user of the São José UBS. The exclusion criteria were:

presenting cognitive alterations that make it difficult to understand the questions.

To identify possible cognitive alterations, we used two validated instruments: the Clock Drawing Test (CDT) and the Verbal Fluency Test. The CDT assesses the individual's ability to draw a complete clock, with numbers and hands. The results are analyzed based on the errors made, and the score ranges from zero to five, with the lowest score given to the worst drawing and the highest to the perfect drawing^(18,19).

The Verbal Fluency Test, in turn, aims to assess verbal fluency performance. To do this, the examinee is instructed to say out loud as many words as possible belonging to the category "animals" within a 1-minute interval. The score is adjusted according to the participant's level of education: illiterate individuals must list at least 9 animals, individuals with 1 to 7 years of schooling must list 12 animals, and those with 8 years or more must list 13 animals^(20,21).

Data collection took place between June 2023 and June 2024. Individual interviews were conducted with the elderly in a private room at the unit. Initially, the invitation was made to people who were waiting for care. All individuals participating in the research voluntarily accepted it and signed the Free and Informed Consent Form (FICF). The objectives of the research were explained and all doubts were answered, using the following instruments: Characterization form, Euroqol-5 Dimensions



(EQ-5D) and European Health Literacy Survey short-short form (HLS-EU-Q6).

The characterization form was used to collect sociodemographic information such as age, sex, education and family income/per capita. Clinical characteristics included the existence of disease and use of medication for treatment.

Quality of life was assessed using the Euroqol-5 Dimensions (EQ-5D) which encompasses five health domains: mobility, personal care, usual activities, pain/discomfort and anxiety/depression. The response options vary in three levels: no problems, some problems and extreme problems. In addition, this instrument consists of the Visual Analog Scale (VAS), where individuals give scores from zero to 100 to their current health status, with 0 being the worst and 100 being the best health condition^(22,23).

The European Health Literacy Survey short-short form (HLS-EU-Q6), validated in Brazil⁽²⁴⁾, assesses the level of health literacy. The instrument consists of six questions, with the following response options: very easy, easy, difficult and very difficult, scoring from one to four respectively in each item. To obtain the final individual score, the six questions are added and divided by the number of items answered. Therefore, higher values indicate better literacy levels. This instrument allows classifying health literacy into three levels: inadequate (≤ 2); problematic (> 2 and ≤ 3); and sufficient (> 3)^(24,25).

The data were coded and organized in a double-entry database and values were compared using Microsoft Excel® version 2013. Statistical data processing was performed using the Statistical Package for the Social Sciences (SPSS) software, version 22.0. Descriptive analyses were performed with the creation of tables, including data on central tendency (mean) and dispersion measures (standard deviation).

After confirming the absence of normality in the data using the Kolmogorov-Smirnov test, the Spearman correlation coefficient was calculated. To interpret the magnitude of the correlation coefficients, criteria were used that consider correlations close to 0.30 as satisfactory; between 0.30 and 0.50 as moderate magnitude; above 0.50 as strong magnitude and below 0.30 as of little practical value, even if statistically significant⁽²⁶⁾.

The Mann-Whitney and Kruskal-Wallis tests were used to compare the perception of QOL according to the level of health literacy. The significance level adopted for the statistical tests was 5% ($p \leq 0.05$).

The study was approved by the Human Research Ethics Committee of the Federal University of São Carlos (CAAE: 67900623.2.0000.5504) and consented to by the Municipal Health Department of São Carlos/SP.

RESULTS

Regarding the classification of literacy level, it was observed that most participants



presented problematic (87%), sufficient (8%) and inadequate (5%) HL.

In the health literacy items, it was found that in questions 1 and 2, participants considered it difficult to assess the need for a second opinion from another doctor (69%) and to use the information provided by the doctor to make decisions (73%).

In questions 3 and 4, respectively, interviewees considered it difficult to find information on how to deal with mental health

problems (70%) and considered it easy to assess the reliability of information on health risks available in the media (53%).

In questions 5 and 6, participants considered it difficult to find information on activities that are beneficial for mental well-being (85%) and to understand the information available in the media on how to become healthier (82%) (Table 1).

Table 1 - Health literacy items of elderly people using Primary Health Care, São Carlos/SP (n=100)

Health literacy items	Very easy	Easy	Difficult	Very difficult
	N(%)	N(%)	N(%)	N(%)
E On a scale from very easy to very difficult, how easily can you:				
1. Assess when you need a second opinion from another doctor?	2(2,0)	25(25,0)	69(69,0)	4(4,0)
2. Use the information your doctor gives you to make decisions about your illness?	1(1,0)	21(21,0)	73(73,0)	5(5,0)
3. Looking for information on how to deal with mental health issues like stress or depression?	1(1,0)	25(25,0)	70(70,0)	4(4,0)
4. Assess whether the information about health risks available in the media is reliable?	-	53(53,0)	46(46,0)	1(1,0)
5. Find information about activities that are good for your mental well-being?	2(2,0)	13(13,0)	85(85,0)	-

6. Understand the information available in the media about how to become healthier?

1(1,0) 15(15,0) 82(82,0) 2(2,0)

Source: Own elaboration (2024).

Table 2 shows that the EQ-5D domains mobility ($p=0.006$), usual activities ($p=0.019$), pain/discomfort ($p<0.001$) and anxiety/depression ($p=0.004$) of QoL showed statistically significant differences in terms of the health literacy level of the elderly individuals

assessed, confirming that elderly individuals without problems related to mobility, usual activities, pain/discomfort and anxiety/depression had a higher level of HL compared to those with moderate or extreme problems in the aforementioned domains.

Table 2 - Comparison between the EQ-5D domains according to the health literacy level of elderly individuals using Primary Health Care, São Carlos/SP (n=100)

EQ-5D Domains	N	Average	p-value*
Mobility			
I have no problem walking	77	2,77	0,006*
I have some problems walking	23	2,56	
Personal care			
I have no problems with my personal care	99	2,73	0,210
I have some trouble washing or getting dressed	1	2,30	
Usual activities			
I have no problems performing my usual activities	86	2,76	0,019*
I have some problems performing my usual activities	14	2,53	
Pain/discomfort			



I have no pain or discomfort	38	2,82	<0,001** a,b
I have moderate pain or discomfort	42	2,76	
I have extreme pain or discomfort	20	2,47	
Anxiety/depression			
I am not anxious or depressed	58	2,80	0,004**c
I am moderately anxious or depressed	28	2,68	
I am extremely anxious or depressed	14	2,49	

*Mann-Whitney test; **Kruskal-Wallis test; a = statistical difference between elderly people without pain or discomfort compared to individuals with extreme pain or discomfort; b = statistical difference between elderly people who had moderate pain or discomfort compared to those who had extreme pain or discomfort; c = statistical difference between elderly people without anxiety or depression compared to respondents with extreme anxiety or depression.

Source: Prepared by the author (2024).

Table 3 shows that all domains, except the visual analogue scale, presented negative correlations, with a weak magnitude in the mobility domain ($r=-0.257$; $p=0.010$) and a moderate magnitude in the pain/discomfort ($r=-$

0.337 ; $p=0.001$) and anxiety/depression ($r=-0.312$; $p=0.002$) domains. Furthermore, a moderate positive correlation was found with the analog scale of health status ($r=0.377$; $p<0.001$).

Table 3 - Spearman correlation coefficients between health literacy and the EQ-5D domains of Primary Health Care users, São Carlos/SP (n =100)

EQ-5D Domains	R	p-value
Mobility	-0,257	0,010
Personal care	-0,146	0,148
Usual acitivities	-0,193	0,054
Pain/discomfort	-0,337	0,001
Anxiety/depression	-0,312	0,002
Visual analogue scale	0,377	<0,001

Source: Own elaboration (2024).



Table 4 shows that, among the individuals interviewed, there was a predominance of females (64%), aged 65 to 69 years (30%), with 12 or more years of schooling

(36%). The majority of participants had a per capita income of up to 1 minimum wage (68%), of which 89% had some associated disease and 87% used medication (Table 4).

Table 4 - Sociodemographic and clinical characteristics of elderly people using Primary Health Care, São Carlos/SP (n= 100)

Sociodemographic and clinical characteristics	N	%
Gender		
Female	64	64
Male	36	36
Age range		
60 – 64	28	28
65 – 69	30	30
70 – 75	25	25
76 – 79	11	11
80 and up	6	6
Education		
Until 4	26	26
5 - 8	20	20
9 - 11	18	18
12 and up	36	36
Per capita income		
Until 1 minimum wage	68	68
1,1 - 2 minimum wages	26	26
2,1 - 3 minimum wages	6	6
Associated disease		
Yes	89	89
No	11	11
Use of medication for treatment		
Yes	87	87
No	13	13

Source: Own elaboration (2024).



DISCUSSION

Regarding demographic characteristics, there was a predominance of females, an aspect also found in other studies^(8,27,28). This data reflects the current Brazilian reality, where there is a higher proportion of elderly women⁽²⁾.

The age range observed is similar to the study found in the literature that examined the fear of coronavirus and the levels of health literacy of elderly people during the pandemic, in Turkey. The authors verified the prevalence of elderly individuals aged between 65 and 69 years⁽²⁹⁾.

Regarding education, it is pointed out that the majority of the interviewees had 12 or more years of education. This finding corroborates the study present in the literature, which aimed to analyze the level of Functional Health Literacy (FHL) of users of the Family Health Unit in the urban area of Altamira, Pará, finding that the majority of the sample had an education equivalent to complete high school⁽³⁰⁾. In contrast, studies have found a predominance of elderly individuals with one to four years of schooling^(8,27).

We observed a prevalence of elderly individuals with associated disease(s). This phenomenon is directly related to the aging process, which involves organic changes that increase the susceptibility to the development of Chronic Noncommunicable Diseases (NCDs)⁽³¹⁾. In addition, the elderly population frequently uses health services, which can facilitate the diagnosis of diseases⁽³²⁾.

The percentage of individuals using continuous medication was also high in the present study. This finding may be related to the increased prevalence of NCDs, which require continuous monitoring and medication adherence for effective treatment⁽³²⁾. In addition, easy and free access to medication for the treatment of chronic diseases may explain this observation. It is also worth highlighting the role of PHC, which, through multidisciplinary teams, can develop actions and encourage changes in habits that improve self-care, resulting in better health and quality of life⁽³³⁾.

The level of health literacy (HL) identified in elderly individuals was problematic (87%) and only sufficient (8%). In a study conducted with 107 individuals diagnosed with type 1 or type 2 diabetes mellitus and aged 18 years or older, in an outpatient clinic in Rio de Janeiro, it was observed that more than half of the interviewees had problematic HL (53.1%). The authors found that female individuals, older individuals and individuals with less than eight years of schooling were less likely to have sufficient HL. Among elderly participants, those aged 65 years or older had a 76% lower chance of having sufficient HL compared to individuals aged up to 45 years⁽³⁴⁾.

A systematic review of the literature indicated that the sociodemographic, economic, and social context and health status are factors associated with low HL in elderly individuals. From this, it is pointed out that low educational level, economic disadvantage and low adherence



to disease treatment are the variables most correlated with HL, identified by the scientific literature⁽³⁵⁾.

On the other hand, in a study that analyzed the correlation between HL and QoL, in individuals with Arterial Hypertension, through the "Mini-Cuestionario de Calidad de Vida en Hipertensión Arterial" (MINICHAL), no statistically significant association was found between HL and QoL. This finding, apparently contradictory, can be explained by the chronic context of hypertension, which can reduce the impact of the condition on aspects of material, physical and emotional well-being, central elements of the concept of QoL⁽³⁶⁾.

In a study that evaluated the elderly hypertensive population, it was found that most participants had inadequate HL (59.5%). The instrument used was the "Brief Test of Functional Literacy" (B-TOFHLA - brief version). In this study, HL was associated with lower education and income below one minimum wage⁽⁸⁾.

In a study conducted in Iran, with the objective of examining the level of HL and its relationship with the QoL of elderly people at the time of hospital discharge, when using the Health Literacy for Iranian Adults (HELIA), an average of 48.22 (out of a total of 100) with inadequate HL was identified, however, the correlation between the HL and QoL variables was positive and presented statistical significance with ($p < 0.05$)⁽²⁸⁾.

In the Brazilian context, a study conducted with hypertensive adults treated by the Family Health Strategy (ESF) in Piauí presented results that converge with those presented in this research, revealing inadequate/marginal levels of HL (82.1%). These aspects can be explained by the difference in the age range of the research audience (18 to 59 years) and by the use of the Test of Functional Literacy in Adults (S-TOFHLA - short version), an instrument that assesses functional literacy⁽³⁶⁾.

In a study that evaluated adults and elderly people with dysphagia in a public hospital in Minas Gerais, an inadequate level of HL was found (53.1%)⁽³⁷⁾. In another study conducted with elderly people diagnosed with Chronic Kidney Disease (CKD), in Recife, the HL found was insufficient (71.7%)⁽³⁸⁾. The authors also found significant associations with sociodemographic data, such as lower education and non-white race.

In this study, it was found that on the EQ-5D visual analogue scale, individuals who self-assessed their health status better indicated higher levels of HL with statistical significance, although the sample presented prevalence of diseases. In agreement with the above, a study carried out in China with community-dwelling elderly individuals indicated that the factors of personality in health, health literacy and QoL are significantly related⁽³⁹⁾. On the other hand, in a study carried out with 6,183 community-dwelling elderly individuals in China, it was



identified through the SF-36 instrument that there was a negative significance between chronic diseases and HL⁽⁴⁰⁾.

It was observed that individuals without problems in the domains of mobility, usual activities, pain/discomfort and anxiety/depression presented a higher level of HL compared to those who presented moderate or extreme problems. Similar to the results presented, a study found a positive correlation between HL and QoL in community-dwelling elderly people in South Korea, using the EQ-5D, as well as the importance of literacy in mediating between frailty and QoL⁽⁴¹⁾.

A study conducted in South Korea demonstrated that higher HL positively influenced the QoL of elderly people over 65 years of age⁽⁴²⁾. In a study conducted in a hospital in Iran, a significant and positive correlation was found between HL and QoL of elderly people⁽²⁵⁾. In Turkey, in a survey with 981 elderly people, it was identified that the level of health training has a significant correlation with QoL, that is, it can be considered as a dependent variable of HL⁽⁴³⁾.

A study conducted with the aim of associating QoL and HL between adequate and inadequate, in thirty elderly people, through the 12-Item Short-Form Health Survey (SF-12), found significance between the variables when asked about how calm and peaceful they felt, and about physical limitations to perform daily activities. Regarding the other questions of the

HL instrument, no statistical significance was found⁽⁴⁴⁾.

Although most studies address and evaluate Functional Health Literacy (FHL), which includes reading comprehension and numerical skills, the prevalence of an inadequate/marginal or insufficient level of HL in the Brazilian population is noted. That said, such levels can result in health complications, it is important that health professionals facilitate the transmission of information, using clear and appropriate language, also promoting health education actions in primary care, so that users are responsible for their self-care⁽¹⁵⁾.

Study limitations

The limitations of this study include the impossibility of predicting a cause-and-effect relationship due to its cross-sectional design. Another aspect to be highlighted is that the LS assessment instrument is not specific for elderly people, but to date there is no specific questionnaire for this population.

CONCLUSIONS

HL was identified as problematic in a significant portion of the elderly population studied, showing a negative correlation with the domains of mobility, pain/discomfort and anxiety/depression in the instrument that assessed QoL. However, the assessment of general health status showed a positive correlation with HL, since, in both, the higher the score, the better the level of HL and self-perception of general health status. This



indicates that the difficulty in understanding and using health information can limit the ability of these people to manage their health effectively, negatively impacting their perception of physical and emotional well-being.

In view of this, it is important that health teams consider the elderly population's need to understand health information, promoting actions that favor their protagonism in care and improvement of QoL. Furthermore, the findings reinforce the importance of intervention studies aimed at improving HL levels among elderly people.

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Funding and Acknowledgements:

We would like to thank the National Council for Scientific and Technological Development (CNPq).

Authorship criteria (authors' contributions)

Cintia Sampaio Abreu contributed to the conception and planning of the study, data collection, writing and final approval of the version.

Victoria Laura contributed to the interpretation of the data, writing and final approval of the version.

Fabiana de Souza Orlandi contributed to the conception and planning of the study, analysis and interpretation of the data, critical review and final approval of the final version.

Declaration of conflict of interest:

Nothing to declare, since the study does not present a conflict of interest.

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