

Swallowing-related quality of life in hospitalized elderly patients: A cross-sectional analytical study

Qualidade de vida relacionada à deglutição de idosos hospitalizados: estudo transversal analítico
Calidad de vida relacionada con la deglución en adultos mayores hospitalizados: estudio transversal analítico

Ronivaldo Pinto Ferreira¹  <https://orcid.org/0000-0003-1740-6149>

Luana Marsicano Alves¹  <https://orcid.org/0000-0002-3933-8688>

Laura Davison Mangilli¹  <https://orcid.org/0000-0003-2739-126X>

How to cite:

Ferreira RP, Alves LM, Mangilli LD. Swallowing-related quality of life in hospitalized elderly patients: A cross-sectional analytical study. *Acta Paul Enferm.* 2023;36:eAPE01502.

DOI

<http://dx.doi.org/10.37689/acta-ape/2023A0015022>



Keywords

Dysphagia; Quality of life; Deglutition disorders; Aging; Nurses improving care for health system elders; Frail elderly; Age factors

Descritores

Disfagia; Qualidade de vida; Transtornos da deglutição; Envelhecimento; Cuidado de enfermagem ao idoso hospitalizado; Idoso fragilizado; Fatores etários

Descriptores

Disfagia; Calidad de vida; Trastornos de deglución; Envejecimiento; Cuidados de enfermería para personas mayores hospitalizadas; Anciano frágil; Factores de edad

Submitted

July 28, 2022

Accepted

November 28, 2022

Corresponding author

Ronivaldo Pinto Ferreira
Email: ronny.pinto@hotmail.com

Associate Editor (Peer review process):

Rafaela Gessner Lourenço
(<https://orcid.org/0000-0002-3855-0003>)
Universidade Federal do Paraná, Curitiba, PR, Brazil

Abstract

Objective: To evaluate swallowing-related quality of life in hospitalized elderly patients.

Methods: Cross-sectional analytical and observational approach was used in our study. Fifty-two elderly patients in a medical clinic of a public hospital in Distrito Federal [Federal District] participated. In addition to collecting sociodemographic and health condition data, the Eating Assessment Tool and the swallowing-related quality of life Questionnaire were applied.

Results: Of the elderly participants, 30.8% had a self-reported risk of dysphagia. The elderly at risk for dysphagia had lower scores in the “eating duration” domain and higher scores in the “mental health” domain. The only domain in which there was no statistical difference in the response pattern of the participants who were, or were not at risk for dysphagia was the “sleep domain.” Among the variables of the 11 domains of the Swallowing Quality of Life Questionnaire, mostly positive correlations were found, with different degrees.

Conclusion: The swallowing-related quality of life of hospitalized elderly patients is directly manifested as decreased social interaction, increased eating time, fear to eat, and swallowing as a burden.

Resumo

Objetivo: Avaliar a qualidade de vida relacionada à deglutição em idosos hospitalizados.

Métodos: Estudo transversal analítico e observacional. Participaram 52 idosos internados em clínica médica de um hospital público no Distrito Federal. Foram aplicados os instrumentos *Eating Assessment Tool* e *Quality of Life in Swallowing Disorders*, além de coleta de dados sociodemográficos e condições de saúde.

Resultados: Dos idosos participantes 30,8% apresentaram risco de disfagia autorrelatada. Os idosos com risco de disfagia apresentaram menor pontuação no domínio “tempo de se alimentar” e maior pontuação no domínio de “saúde mental”. O único domínio que não houve diferença estatística no padrão de resposta dos participantes que apresentaram ou não risco de disfagia foi o domínio sono. Entre as variáveis dos 11 domínios do *Quality of Life in Swallowing Disorders* foi possível observar correlações positivas em sua maioria com diferentes graus.

Conclusão: A qualidade de vida relacionada à deglutição de idosos hospitalizados está diretamente manifestada com a diminuição do convívio social, aumento do tempo para se alimentar, medo e fardo.

Resumen

Objetivo: Evaluar la calidad de vida relacionada con la deglución en adultos mayores hospitalizados.

Métodos: Estudio transversal analítico y observacional. Participaron 52 adultos mayores internados en clínica médica de un hospital público en el Distrito Federal. Se aplicaron los instrumentos *Eating Assessment Tool* y *Quality of Life in Swallowing Disorders*, además de la recopilación de datos sociodemográficos y condiciones de salud.

¹Universidade de Brasília, Brasília, DF, Brazil.

Conflicts of interest: None to declare.

Resultados: De los adultos mayores que participaron, el 30,8 % presentó riesgo de disfagia autoinformada. Los adultos mayores con riesgo de disfagia presentaron un menor puntaje en el dominio "tiempo para alimentarse" y un puntaje más alto en el dominio "salud mental". El único dominio en el que no hubo una diferencia estadística en el tipo de respuesta de los participantes que presentaron o no riesgo de disfagia fue el del dominio sueño. Entre las variables de los 11 dominios del *Quality of Life in Swallowing Disorders* se observaron mayormente correlaciones positivas en diferentes niveles.

Conclusión: La calidad de vida relacionada con la deglución de adultos mayores hospitalizados está directamente manifestada con la reducción de la convivencia social, el aumento de tiempo para alimentarse, el miedo y la carga.

Introduction

The natural aging process, together with geriatric syndromes, brings about several changes in motor and sensory functions involved in swallowing, with risks of negative impact on nutrition, lung health, and participation in social functions involving eating and drinking.⁽¹⁾ This impairment affects the stomatognathic system: Its structures – tongue, cheeks, jaw, lips, occlusal area, and palate; and functions – sucking, breathing, chewing, speaking, and swallowing.⁽²⁾

Generally, this impairment in the elderly population is manifested as difficulty chewing or initiating the swallowing process, with the presence of coughing, choking, pyrosis, chest pain, or nasal regurgitation during meals, and the sensation of food stuck in the throat after meals. These effects make the swallowing dynamic more vulnerable to disturbances caused by minor health changes, such as upper airway infections.⁽³⁾

Changes in swallowing functionality can be classified as dysphagia, which is defined as any impediment in the effective conduction of food from the mouth to the stomach, by means of interrelated phases, commanded by a complex neuromotor mechanism.⁽⁴⁾ Presbyphagia, characterized as changes in swallowing function due to the aging process, may be characterized by reduced muscle mass, reduced elasticity of the phonoarticulatory organ structures, reduced saliva production, changes in the cervical spine, or reduced oral and pharyngeal sensitivity, including reduced sense of smell and taste. They may also cause damage to oral health.⁽⁵⁾

The recognized prevalence of dysphagia in the elderly is 10% among hospitalized individuals and 30%–60% among individuals in home care programs.⁽⁶⁾ According to the Brazilian Society of Geriatrics and Gerontology (SBGG) of São Paulo,

the frequency of deaths from choking, either by pneumonia or by aspiration or asphyxia, is higher in the elderly than in other age groups. From 2007 to 2010, choking while eating caused the deaths of 2,114 people over the age of 65 in the United States.⁽⁷⁾

Besides causing changes in stomatognathic functions, changes in swallowing can cause eating restrictions in the elderly, bringing feelings of frustration, discouragement, shame, and embarrassment in front of their friends and family. These feelings lead them to isolate themselves during meals or avoid eating in front of other people, resulting in social isolation.⁽⁸⁾ These restrictions should be raised and observed by the healthcare professional.⁽⁴⁾

It is necessary to check the quality of life of elderly individuals with all the possible signs evaluated during hospitalization. Quality of Life (QOL) is defined as an individual's perception of his or her condition of life in the context of cultural and value systems, and its relationship to expectations, goals, and standard of care. Based on this premise, it is necessary to evaluate the implications of the adaptations that dysphagic individuals need to make in order to eat effectively and safely. The new way of eating necessitated by this dysfunction can bring frustration, embarrassment, discouragement, and social isolation, as the individuals tend to eat their meals alone, avoiding eating in the presence of family members or in public places.^(9,10)

The aim of the study, therefore, was to evaluate swallowing-related quality of life in hospitalized elderly people.

Methods

This cross-sectional study was conducted with 52 elderly patients admitted to a medical clinic of a

public hospital in the Federal District (DF), during September–December 2021. The sample population, selected by convenience, consisted of elderly people aged 60 years and older. Elderly people with severe cognitive impairments (affecting perceptual ability, judgment, and language); who had an amputated lower limb; who used orthopedic prostheses on their lower limbs; who had edema in the lower limb; or who were on a suspended oral diet were excluded. These last three exclusion criteria are consistent with needs for a larger study conducted with the population described.

Initially, general data on the participants was gathered, such as hospitalization time, age, sex, education, race, color, diseases, use and route of administration of medications, type of diet offered, changes in taste, mobility, and frequency of oral hygiene. These data were collected through a structured survey on accessing the participant's medical records by the TrakCare® health information system of the Federal District's Health Secretariat, and through questions answered by the participant at the time of the anamnesis.

The Eating Assessment Tool (EAT-10), a practical instrument for routine use in elderly care, was then applied. It is a subjective and specific questionnaire to assess the degree of dysphagia symptoms. Each question is given a score from 0 (no problems) to 4 (severe problem), with the maximum score of the instrument being 40 points and the cut-off scores being: <3 points = no risk for dysphagia and >3 points = risk for dysphagia. First question in the questionnaire is "Answer each question by writing the number of points in the boxes. To what extent do you experience the following problems?" It then follows with the statements: My swallowing problem has caused me to lose weight; My swallowing problem interferes with my ability to go out for meals; swallowing liquids takes extra effort; swallowing solids takes extra effort; swallowing pills takes extra effort; swallowing is painful; The pleasure of eating is affected by my swallowing; When I swallow food sticks in my throat; I cough when I eat; and swallowing is stressful.⁽¹¹⁾ After the participant has given their responses, the points given

to each item are then summed, and a result ≥ 3 indicates change.

The evaluation of quality of life in dysphagia was performed by applying the Swallowing Quality of Life Questionnaire (SWAL-QOL)^(9,10) validated for Brazilian Portuguese by Portas.⁽¹²⁾ This questionnaire consists of 44 questions that assess eleven domains, namely: Swallowing as a burden, Desire to eat, eating duration, frequency of symptoms, Food selection, Communication, fear to eat, mental health, social function, sleep, and fatigue. The participant must state how often each of the statements in each domain occurs (almost always, often, sometimes, hardly ever, and never), or how true they are (Always true, Often true, Sometimes true, Hardly ever true, and never true), or how strongly he or she agrees with them (strongly agree, Agree, Uncertain, Disagree, and strongly disagree). The points given for each answer within each domain must be summed and the result divided by the number of questions in the analyzed domain. The final result of the instrument is the sum of the scores in each domain, which can vary from 0 to 100; lower the score, poorer the swallowing-related quality of life.^(10,13)

The software programs Microsoft Excel 2018 and the Statistical Package for the Social Sciences version 19.0 were used to analyze and interpret the results. Descriptive statistical analyses were performed to present and summarize the data collected. Categorical variables were presented by absolute and relative frequencies. Continuous variables were presented as means and standard deviation. The SWAL-QOL variables were tested for normality by the Kolmogorov–Smirnov test, and since they did not show normal probability distribution, the Mann–Whitney test for nonparametric variables was used. Spearman's correlation coefficient was applied to verify the associations between the SWAL-QOL variables. The confidence level adopted in this study was 95%.

This study is derived from the research project "Assessment of the risk of dysphagia in hospitalized elderly and its relation to nutrition, sarcopenia, hydration, and QOL: An analytical and observational cross-sectional study," approved by the Research

Ethics Committee of the Faculty of Ceilandia of the University of Brasilia (CEP/FCE), under to opinion number 3.749.828 (Certificate of Presentation of Ethical Appreciation [Proof of Application for Ethical Review]: 18188219.0.0000.8093) and by the Ethics and Research Committee of the Health Sciences Teaching and Research Foundation of the Health Secretariat of the Federal District (CEP/FEPECS), under to opinion number 3.820.960. All participants were informed about the research objectives and data confidentiality, after which they signed the informed consent form.

Results

The sample consisted of 52 individuals with a mean age of 73 (± 8.3) years. The average hospitalization time, based on the date of data collection, was 5.5 (± 3.86) days (Table 1).

Table 1. Age and hospitalization time of the elderly patients. Brasília, DF, 2022

Variables	Mean	Standard Deviation	Minimum	Maximum
Age (years)	73.17	8,38	61.00	94.00
Hospitalization time (days)	5.50	3.86	1.00	15.00

In relation to sex, there was an equal balance of male and female participants (Table 2). The majority of the participants were of White color/race, followed by Brown. Most were married, and in relation to level of education, most had incomplete elementary school education. Regarding hospitalization, most of the individuals had come from other health care units. The main reason for hospitalization was respiratory issues, with 39 (75%) of the elderly patients being infected with the Coronavirus (COVID-19). Most of the participants had normal mobility. Diabetes Mellitus (DM) and Systemic Arterial Hypertension (SAH) were found in a large proportion of the participants. Besides DM and SAH, 65.38% had other comorbidities. The number of medications taken varied among the participants; the majority participants took three medications, followed by five, and none. As for diet, most were on a soft diet, administered by the oral route.

The most commonly stated dysphagia-related complaint was cough, but most of the participants had no other related complaints. The data on oral health showed that most wore full dentures and performed oral hygiene twice a day. Most of the respondents said they had never smoked or consumed alcohol, followed by those who had used cigarettes and alcohol in the past, but no longer had the habit.

Table 2. Sociodemographic, clinical and functional characterization of hospitalized elderly patients

Variables	Classification	n = 52 n(%)
Sex	Female	28(53.85)
	Male	24(46.15)
Race/Color	East Asian	1(1.92)
	White	32(61.54)
	Brown	18(34.62)
	Black	1(1.92)
Marital status	Married	21(40.38)
	Divorced	5(9.62)
	Single	5(9.62)
	Stable Union	5(9.62)
Education	Widow/Widower	16(30.77)
	Illiterate	7(13.46)
	SE-Comp.	8(15.38)
	SE-Incomp.	1(1.92)
	EE-Comp.	6(11.54)
	EE-Incomp.	26(50.00)
	HE-Comp.	4(7.70)
Coming from another health unit	No	17(32.69)
	Yes	35(67.31)
Reason for hospitalization	Surgical	12(23.08)
	Respiratory	40(76.92)
Covid-19	No	13(25.00)
	Yes	39(75.00)
Systemic arterial hypertension	No	18(34.62)
	Yes	34(65.38)
Diabetes mellitus	No	30(57.69)
	Yes	22(42.31)
Other comorbidities	No	18(34.62)
	Yes	34(65.38)
Number of medications in continuous use	1	5(9.62)
	2	6(11.54)
	3	10(19.23)
	4	8(15.38)
	5	5(9.62)
	More than 5	9(17.31)
Complaints	No use of medication	9(17.31)
	Choking	5(9.62)
	Lack of appetite	1(1.92)
	Cough	13(25.00)
Dentition	No complaints	33(63.46)
	Permanent dentition	2(3.85)
	Dentulism	4(7.69)
	Partial Dentures	12(23.08)
	Full Dentures	34(65.38)

Continue...

Continuation.

Variables	Classification	n = 52 n(%)
Type of diet	Soft/Mushy	6(11.54)
	Soft	28(53.85)
	Enteral/Mushy	3(5.77)
	Liquid	2(3.85)
	Mushy	13(25.00)
Dietary path	Oral	49(94.23)
	Nasoenteral/oral tube	3(5.77)
Changes in taste	Absent	2(3.85)
	Decreased	18(34.62)
	Normal	30(57.69)
	Complaint of changes in tastes	2(3.85)
Frequency of oral hygiene	1	8(15.38)
	2	20(38.46)
	3	6(11.54)
	More than 3	18(34.62)
Mobility	Bedridden	4(7.69)
	With assistance	15(28.85)
	Normal	33(63.46)
Smoking/Alcoholism	Alcoholism	6(11.54)
	Smoking	1(1.92)
	Former alcoholic	5(9.62)
	Former smoker	11(21.15)
	Former smoker/Former Drinker	11(21.15)
	Never smoked or consumed alcohol	18(34.62)

SE-Comp; Complete Secondary Education, SE-Incomp; Incomplete Secondary Education, EE-Comp; Complete Elementary Education, EE-Incomp; Incomplete Secondary Education, HE-Comp; Complete Higher Education

Of the 52 participants, 30.8% were at risk of dysphagia according to the EAT-10 and 69.2% were not at risk (Table 3). On observing the data, we see that the elderly at risk of dysphagia had low scores in the eating duration domain and high scores in the mental health domain. In the same group, no domain reached the full score. In the group without risk of dysphagia, the lowest score was also for the eating duration domain, and the highest was for the swallowing as a burden domain. Comparison between groups showed that the only domain in which there was no significant difference between the mean responses of the participants who were, or were not at risk of dysphagia was sleep.

In chart 1, the values in gray show the significant correlations between the SWAL-QOL variables of all participants, indicating a statistically significant association between them. Positive values of the correlation coefficient correspond to a directly proportional association. No negative association was observed.

Table 3. Results of the variables related to swallowing-related quality of life, by domain, according to the EAT-10 classification in hospitalized elderly patients. Brasília, DF, 2021

Classification EAT-10 / Domains of the SWAL-QOL	Risk of dysphagia n = 16	No risk of dysphagia n = 36	p-value
Swallowing as a burden	75.00 ± 7.74	100.00 ± 0.00	0.00*
Desire to eat	86.44 ± 5.74	96.06 ± 1.71	0.02*
Eating duration	47.66 ± 9.90	78.82 ± 5.00	0.01*
Frequency of symptoms	75.88 ± 4.14	93.03 ± 1.08	0.00*
Food Selection	80.47 ± 5.35	96.53 ± 1.54	0.00*
Communication	78.13 ± 6.70	96.18 ± 1.48	0.00*
Fear to eat	62.48 ± 6.56	88.88 ± 2.47	0.00*
Mental Health	89.69 ± 2.98	99.86 ± 0.14	0.00*
Social function	88.44 ± 4.56	100.00 ± 0.00	0.00*
Sleep	79.94 ± 6.73	88.89 ± 2.85	0.39
Fatigue	75.47 ± 4.60	88.61 ± 1.88	0.01*

Mann-Whitney nonparametric test; *p-value significant

Discussion

The act of swallowing (or more clearly, eating) involves not only the physiological intake of food, but also psychological, cultural, and social experiences. Most existing studies are concerned with the physiological function of swallowing, and there is a lack of studies focusing on the QOL of individuals with dysphagia.⁽¹⁴⁾ This fact was observed by the researchers, who found no studies that evaluated swallowing-related quality of life in hospitalized elderly people, except for studies that referred to neurological diseases.

In our study, self-reported quality of life through the SWAL-QOL showed a statistically significant relationship with the risk of dysphagia by the EAT-10 in ten domains ($p < 0.05$), with sleep pattern being the only domain to show no relationship ($p = 0.39$). Ferraz et al. conducted a study with 110 healthy elderly people in outpatient care, and found no association between the risk of dysphagia and swallowing-related quality of life ($p > 0.05$).⁽¹⁵⁾ This difference between the cited study and the results of the present study may be related to the environment at the time of the study (inpatient *versus* outpatient) and the health status of the participants, because unlike those of our study, the subjects of that study were healthy and not hospitalized.

Analyzing hospitalized elderly patients at risk of dysphagia (Table 3), we see that the mean score in the 11 domains was lower than that of elderly

Chart 1. Correlation of swallowing-related quality of life variables, by domain, of hospitalized elderly patients

Variables		Fatigue	Sleep	Function social	Mental Health	Fear to eat	Communication	Food selection	Frequency of symptoms	Eating duration	Desire to eat	Swallowing as a burden
Swallowing as a burden	Coef. of Correlation	0.45	0.20	0.53	0.52	0.39	0.59	0.40	0.47	0.38	0.17	1.00
	p-Value	0.00*	0.15	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.01*	0.22	-
Desire to eat	Coef. of Correlation	0.20	0.21	0.47	0.32	0.44	0.13	0.34	0.26	0.15	1.00	-
	p-Value	0.16	0.14	0.00*	0.02*	0.00*	0.37	0.01*	0.07	0.30	-	-
Eating duration	Coef. of Correlation	0.23	0.02	0.26	0.42	0.56	0.26	0.36	0.50	1.00	-	-
	p-Value	0.11	0.86	0.06	0.00*	0.00*	0.07	0.01*	0.00*	-	-	-
Frequency of symptoms	Coef. of Correlation	0.45	0.16	0.38	0.64	0.68	0.50	0.43	1.00	-	-	-
	p-Value	0.00*	0.25	0.01*	0.00*	0.00*	0.00*	0.00*	-	-	-	-
Food Selection	Coef. of Correlation	0.31	0.28	0.42	0.54	0.42	0.09	1.00	-	-	-	-
	p-Value	0.03*	0.04*	0.00*	0.00*	0.00*	0.55	-	-	-	-	-
Communication	Coef. of Correlation	0.40	0.01	0.37	0.43	0.48	1.00	-	-	-	-	-
	p-Value	0.00*	0.95	0.01*	0.00*	0.00*	-	-	-	-	-	-
Fear to eat	Coef. of Correlation	0.53	0.30	0.36	0.68	1.00	-	-	-	-	-	-
	p-Value	0.00*	0.03*	0.01*	0.00*	-	-	-	-	-	-	-
Mental Health	Coef. of Correlation	0.41	0.25	0.54	1.00	-	-	-	-	-	-	-
	p-Value	0.00*	0.07	0.00*	-	-	-	-	-	-	-	-
Social function	Coef. of Correlation	0.26	0.27	1.00	-	-	-	-	-	-	-	-
	p-Value	0.07	0.05	-	-	-	-	-	-	-	-	-
Sleep	Coef. of Correlation	0.42	1.00	-	-	-	-	-	-	-	-	-
	p-Value	0.00*	-	-	-	-	-	-	-	-	-	-
Fatigue	Coef. of Correlation	1.00	-	-	-	-	-	-	-	-	-	-
	p-Value	-	-	-	-	-	-	-	-	-	-	-

Spearman correlation coefficient; *p-value significant

patients without risk of dysphagia. This demonstrates that social, cultural, and biopsychological issues related to swallowing may be altered before hospitalization and exacerbated during hospitalization, with repercussions after discharge from hospital. According to Hong et al, in the current global health situation, where hospitals have been and may again be overburdened as a result of the need for priority care for individuals with Covid-19 or other pandemics, especially in services that focus on respiratory diseases, preventing readmission of elderly patients has become a priority.⁽¹⁶⁾

The domains with the lowest QOL scores in the elderly at risk of dysphagia were eating duration and fear to eat. Eating duration was expressed as taking longer to eat a meal compared to others, and the predominant self-reported factors of the fear to eat domain were fear of choking and pneumonia. The literature points out that sleep and fatigue were the domains that scored the lowest healthy elderly people in a university hospital.⁽¹⁵⁾

We believe that a longer eating duration may be related to dentition, since most of the participants wore dentures and, according to reports, ate food with a “harder” consistency at home than in

the hospital. In a study by Cassol et al. it was reported that elderly people who used a dental prosthesis and reported poor adaptation to it, presented low mean scores of QOL in the domains eating duration, swallowing as a burden and frequency of symptoms.⁽¹⁷⁾

Our results indicate that swallowing as a burden and frequency of symptoms also had low mean scores in the elderly at risk of dysphagia, and when compared to the elderly not at risk of dysphagia, this fact became more evident, with a difference between the means of the groups of up to 25 points. It should be noted that the frequency of symptoms domain includes, among other aspects, complaints related to the oral phase of swallowing, such as chewing characteristics.⁽¹⁷⁾

It is also possible that due to the changes resulting from aging, such as decreased body muscle strength and the need for dental prostheses, the respondents are self-evaluating their eating duration in relation to a previous period of their lives. Longer eating duration may also be a necessary adjustment to mitigate aspects of the SWAL-QOL, resulting in higher scores for those other domains. For example, swallowing complaints may be receiving higher

scores simply because the respondent is taking longer to eat in order to minimize these effects.^(17,18)

In the correlation analysis (Chart 1), among the variables of the 11 SWAL-QOL domains, positive correlations were found for most mean scores, albeit with different degrees. According to the classification of the correlation coefficient, we found moderate statistically significant correlations between frequency of symptoms and fear to eat, and between fear to eat and mental health. Thus, we see that if the individual presents symptoms such as coughing, choking, food stuck in the throat, hawking, or problems chewing, greater their fear to eat will be; and this fear to eat will, in turn, affect their mental health, bringing frustration and anxiety.

A study conducted in Europe with 360 institutionalized elderly people showed that 36% avoided eating with other people, 41% had anxiety and panic when eating, and only 45% found eating pleasant.⁽¹⁹⁾ These data may also be linked to discomfort caused by frequency of symptoms, fear to eat and mental, as correlated in this research.

Swallowing as a burden also showed a moderate degree of correlation with Communication, indicating that others find it difficult to clearly understand what these elderly people are trying to say. The researcher did not observe any difficulty in understanding the participants' speech; this may be because sufficient time and patience were given for them to respond, without interruption.

The Desire to eat is manifested through finding food that a person likes, and is able to eat. This domain also showed a moderate positive correlation with social function. We identified that this issue can be represented by statements like "They stop eating out because of swallowing or chewing problems."

Eating duration showed a moderate degree of positive correlation with fear to eat. Hospitalized elderly patients take longer to eat when they have high levels of fear of choking or pneumonia.

The question about selecting appropriate foods for swallowing showed a moderate positive correlation with mental health. The more choices they have to make to adapt their chewing and swallowing function, the more impatient and frustrated

they will become, and more often than not, this results in insufficient nourishment.

The Communication domain showed a moderate degree of positive correlation with fear to eat. The more the elderly person's speech and needs are not understood, the more they will be offered foods that do not meet their preferences or requirements, increasing the fear of choking and pneumonia.

The positive correlation between mental health and social function was moderate. Thus, we can infer that anxiety and frustration increase the likelihood of the person performing poorly in social settings with family members, preventing them from eating out, or conversely, that the fear of eating out may further exacerbate their frustration and anxiety.

Sleep showed a moderately positive correlation with fatigue. As the difficulty to fall asleep increases, so does the tiredness of the person. This difficulty in falling asleep was observed in the reports, through statements about being in a hospital environment with routines different from their own, or that they were sleeping a lot during the day and not sleepy at night.

Fatigue, which involved reports related to issues of hospitalization and clinical symptoms, showed a moderate degree of positive correlation with fear to eat. Weakness and fatigue in the hospitalized elderly patient increases the fear of having pneumonia, which can result from bronchoaspiration or choking when eating food that is not suitable for them.

The correlations presented in this study show that dysphagia can be considered an incapacitating condition for the hospitalized elderly individual, with regard to both functional and emotional-relational aspects. Farri and colleagues conducted a study of 73 individuals between the ages of 40 and 80 to identify the social and emotional consequences of dysphagia. Their results revealed that dysphagic individuals tend to isolate themselves; many avoid eating out with others, partly because they feel ashamed, partly because they require assistance during meals, or perhaps because they are disinterested in eating out due to the limited foods they can eat, causing anxiety and panic. All these aspects contribute to people with swallowing disorders feeling restless, with a sense of being differ-

ent in relation to their peers, leading to a loss of self-esteem.⁽²⁰⁾

Regarding emotions and relationships with family members and health care professionals, Bushuven et al. report that in individuals with dysphagia, anger is manifested as severe frustration, mainly due to their own abilities rather than at other people. Health care professionals reported that dysphagic patients become angry because they do not receive their favorite meals, while family members reported that anger is expressed because they have not received the necessary guidance on safe swallowing. Sadness was presented in the form of failure of rehabilitation therapy, a lack of concentration when swallowing, with the occurrence of aspiration, and when the elderly individual sees that the family feels sorry for them. Anxiety was shown as a fear of choking to death; for health professionals and family members, it was seen in reports that they used to be able to eat more complex meals but now have to choose adapted meals. Punishment is reported as a religious and spiritual questioning. Embarrassment is seen in reports of attracting unwanted attention when eating in public places, due to the necessary adaptations, or because they make too much mess at the table.^(21,22)

It was observed that the SWAL-QOL instrument, because it has more questions than the other instruments applied in this study, and due to its content, caused uneasiness in the participants. Many found the questions with similar answers repetitive. Perhaps the instrument can be re-evaluated and a reduced, pathology-specific version produced, focusing on the domains that scored lowest (eating duration, fear to eat and swallowing as a burden) specifically for this population.

In view of the changes in swallowing-related quality of life, the nurses' essential role is recognized, because they must always be attentive to the needs of individuals during hospitalization, considering that the work process of this professional is focused on integral care of the individual. Besides the importance of health care, nurses usually make up the largest team and are available round the clock, enabling more effective observation and early identification of these changes.⁽²³⁾

Conclusion

The swallowing-related quality of life of hospitalized elderly at risk for dysphagia is directly manifested as decreased social interaction, increased eating duration, fear to eat and swallowing as a burden. Healthcare professionals in the hospital environment should screen for the risk of dysphagia in the elderly, and should be aware of how this change affects QOL before, during, and after hospitalization. Also, family members/caregivers should be given guidance on these biopsychosocial and cultural changes.

Collaborations

Ferreira RP, Alves LM, and Mangilli LD collaborated on the study design, data analysis and interpretation, writing the article, relevant critical review of the intellectual content, and approval of the final version to be published.

References

1. Mancopes R, Gandhi P, Smaoui S, Steele CM. Os parâmetros físicos da deglutição mudam com o envelhecimento saudável? *OBM Geriat*. 2021;5(1):153.
2. Lima RM, Amaral AK, Aroucha EB, Vasconcelos TM, Silva HJ, Cunha DA. Adaptações na mastigação, deglutição e fonoarticulação em idosos de instituição de longa permanência. *Rev CEFAC*. 2009;11(Supl 3):405–22.
3. Furkin AM, Santini CR. *Fonoterapia nas disfagias orofaríngeas neurogênicas. Disfagias Orofaríngeas*. Barueri (SP): Pró-Fono; 1999. 368 p.
4. *I Consenso Brasileiro de Nutrição e Disfagia em Idosos hospitalizados*. Barueri (SP): Minha Editora; 2011. 106 p.
5. Wirth R, Smoliner C, Jäger M, Warnecke T, Leischker AH, Dziewas R; DGEM Steering Committee*. Guideline clinical nutrition in patients with stroke. *Exp Transl Stroke Med*. 2013;5(1):14.
6. Cuppari L. *Nutrição clínica no adulto: guia de medicina ambulatorial e hospitalar (UNIFESP/Escola Paulista de Medicina)*. 4 ed. São Paulo: Manole; 2018. 624 p.
7. Sociedade Brasileira de Geriatria e Gerontologia (SBGG). Engasgo: sinal de problema para se alimentar. São Paulo: SBGG; 2022 [citado 2022 Mar 19]. Disponível em: <https://www.sbgg-sp.com.br/engasgo-sinal-de-problema-para-se-alimentar/>
8. Cabre M, Serra-Prat M, Palomera E, Almirall J, Pallares R, Clavé P. Prevalence and prognostic implications of dysphagia in elderly patients with pneumonia. *Age Ageing*. 2010;39(1):39-45.

9. Gonçalves BF, Bastilha GR, Costa CC, Mancopes R. Utilização de protocolos de qualidade de vida em disfagia: revisão de literatura. *Rev CEFAC*. 2015;17(4):1333–40.
10. McHorney CA, Robbins J, Lomax K, Rosenbek JC, Chignell K, Kramer AE, et al. The SWAL-QOL and SWAL-CARE outcomes tool for oropharyngeal dysphagia in adults: III. Documentation of reliability and validity. *Dysphagia*. 2002;17(2):97-114.
11. Carvalho B, Sales DS. *Disfagia e Desnutrição*. Rio de Janeiro: SBGG; 2016. 15 p.
12. Portas JG. Validação para a língua portuguesa brasileira dos padrões de qualidade de vida em disfagia (SWAL-QOL) e satisfação do paciente e qualidade do tratamento no disfagia (AWAL-CARE) [dissertação]. São Paulo (SP): Fundação Antônio Prudente; 2009.
13. Vieira DO. Validação da versão portuguesa do paciente em SWAL-QOL com patologia oncológica da cabeça e do pescoço [dissertação]. Porto, Portugal: Instituto de Ciências Biomédicas Abel Salazar, Universidade do Porto; 2010.
14. Kim DY, Park HS, Park SW, Kim JH. The impact of dysphagia on quality of life in stroke patients. *Medicine (Baltimore)*. 2020;99(34):e21795.
15. Ferraz MS, Guimarães MF, Nunes JA, Azevedo EH. Risco de disfagia e qualidade de vida em titulares. *Distúrbio Comun*. 2020;32(3):454–61.
16. Hong YR, Lawrence J, Williams D Jr, Mainous III A. Population-level interest and telehealth capacity of us hospitals in response to COVID-19: cross-sectional analysis of google search and national hospital survey data. *JMIR Public Health Surveill*. 2020;6(2):e18961.
17. Cassol K, Galli JF, Zamberlan NE, Dassie-Leite AP. Quality of life in swallowing in healthy elderly. *J Soc Bras Fonoaudiol*. 2012;24(3):223–32.
18. Oliveira JS, Mattoso FC, Oliveira AB, Di Ninno CQ. Fonoaudiologia e adaptação da prótese dentária total em idosos: o que os dentistas sobre isto? *Rev CEFAC*. 2005;7(1):50–4.
19. Ekberg O, Hamdy S, Woisard V, Wuttge-Hannig A, Ortega P. Carga social e psicológica da disfagia: seu impacto no diagnóstico e tratamento. *Disfagia*. 2002;17(2):139-46.
20. Farri A, Accornero A, Burdese C. Social importance of dysphagia: its impact on diagnosis and therapy. *Acta Otorrinolaringol Ital*. 2007;27(2):83–6.
21. Bushuven S, Niebel I, Huber J, Diesener P. Emotional and Psychological Effects of Dysphagia: Validation of the Jugendwerk Dysphagia Emotion and Family Assessment (JDEFA). *Disfagia*. 2022;37:375–91.
22. Ortega O, Martín A, Clavé P. Diagnóstico e manejo da disfagia orofaríngea em idosos, estado da arte. *J Am Med Dir Assoc*. 2017;18(7):576–82.
23. Dias SF, Queluci GC, Mendonça AR, Souza VR. Protocolo de cuidado de enfermagem no paciente disfágico hospitalizado. *CoDAS*. 2020;32(3):e20190060.