

Sexuality, self-esteem and sexual dysfunction among the elderly

Abstract

Introduction: The aging process is marked by physiological changes, which can feed stereotypes mainly of dysfunction and dissatisfaction. It is noted that there are prejudices related to active sexuality in old age.

Objective: To describe the sociodemographic, economic profile, self-esteem and sexual dysfunction, knowledge and attitudes of the elderly; compare the knowledge and attitudes related to the sexuality of the elderly with sex and correlate the knowledge and attitudes related to the sexuality of the elderly with age, self-esteem and sexual dysfunction.

Methods: Quantitative, cross-sectional, analytical and observational study. Data were collected via telephone contact, between October 2020 and May 2021. 218 elderly people living in the urban area of Uberaba-MG participated. A sociodemographic questionnaire, the Rosenberg Self-Esteem Scale, the Attitudes and Knowledge Scale about Sexuality in Aging (ASKAS), the female version of the Sexual Quotient (SQ-F) and the male version of the Sexual Quotient (SQ-M) were used.

Results: The average age of the participants was 74.3 (SD=7.97). Regarding sexual satisfaction/performance, most women reported it as unfavorable to regular and men as good to excellent. Elderly men had better knowledge about sexuality compared to elderly women, and a less conservative attitude than women. Greater knowledge about sexuality was related to younger age, higher self-esteem and greater sexual satisfaction/performance among men.

Conclusion: It is essential that professionals address the issue of sexuality among the elderly.

Keywords: elderly, sexuality, knowledge, attitudes

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Introduction

The aging process is marked by physiological changes, such as weight loss, reduction in body mass, wrinkling of the skin, hearing loss or reduction, loss and wear of teeth, decreased intestinal mobility and weakening of the bladder muscles.¹ However, the fact that there are transformations conditioned by age can feed stereotypes mainly of dysfunction and dissatisfaction, and that elderly people are not attractive, inducing human beings to have a pessimistic attitude regarding sex in old age, often being considered an immoral act, and contributing to the stigma of elderly people as being asexual.² Additionally, society also demonstrates prejudices related to active sexuality in old age, as do some elderly people. It is necessary to spread among them the idea that they need to know about sexuality in old age, helping them with the information that physiological changes at this stage can allow them to feel pleasure, even if they feel alone or are widowed.³

It should be noted that independent of the same gender, the elderly are equally depreciated. However, elderly women may suffer more from the spread of stereotypes. The divergences also arise from the fact that in the media and in medical care, interventions are generally aimed at improving the sexual function of elderly men.⁴ Another important factor refers to the occurrence of Sexually Transmitted Infections (STIs) in the elderly, due to the lack of discernment on the subject; including the difficulty or non-use of condoms, which combined with the inability of health professionals to not talk about sexuality with this public makes the prevention and/or diagnosis of these diseases difficult.⁵

A study with elderly people observed the difficulty in separating sexuality from sexual acts; some were unaware of the meaning of sexuality at this stage of life and did not know how to experience it.⁶ Another survey with elderly women in Pernambuco showed that women tend to have more conservative attitudes.⁷ Carvalho et al.,⁸ reports that the fact that society imposes a perfect body standard on women negatively influences the perception of body image, compromising their self-esteem and, consequently, the performance in the quality of their sexual life.

In this case, self-acceptance is necessary for the elderly person to like themselves. Thus, favorable self-esteem makes the elderly person feel respected, recognized, independent and secure.⁹ Therefore, given the increase in the life expectancy of the elderly, in addition to the myths, taboos and stereotypes imposed by society, as described in the scientific literature, in addition to the scarcity of studies on the subject, it is necessary to identify the factors that can interfere in the knowledge and attitudes related to sexuality. The results obtained may support and stimulate educational health actions aimed at this population. Thus, the objectives of the study were to describe the sociodemographic, economic profile, self-esteem and sexual dysfunction, knowledge and attitudes of the elderly; compare the knowledge and attitudes related to the sexuality of the elderly with sex and correlate the knowledge and attitudes related to the sexuality of the elderly with age, self-esteem and sexual dysfunction.

Methods

Study with a quantitative, cross-sectional, analytical and observational approach, which is part of a larger project, entitled

“Survey on the Sexuality of Elderly People – ISI Project”. For the present study, a sample from the city of Uberaba (MG) was used, based on a list containing the names and telephone numbers of the 803 elderly people previously interviewed from a larger project, entitled “Active Aging, Global Functionality and Quality of Life among elderly people in Health Microregion of Uberaba (MG)”, conducted by the Collective Health Research Group of the Federal University of Triângulo Mineiro (UFTM), considering only the elderly in Uberaba-MG.

The inclusion criteria were: people aged 60 or over, of both sexes, who reside in the urban area of the city of Uberaba (MG) and who were able to answer and answer questions over the telephone. Elderly people who could not be reached by telephone after at least six attempts by the interviewer, or who refused to participate in the study, were excluded.

Thus, referring to the initial list of 803 elderly people, 218 responded to the questionnaire. Among the losses, one elderly woman did not answer the sexual dysfunction questionnaire, 31 elderly people died, 45 did not have the physical or psychological conditions to respond, 98 refused, 195 no longer had the same telephone or the telephone was non-existent and 215 were not found after at least six attempts by the interviewers. Data collection was carried out via telephone contact between October 2020 and May 2021, by 10 interviewers trained in how to properly fill out the collection instruments and how to approach the interviewee. Due to the new Coronavirus pandemic, in order to avoid contact between interviewers and other members of the project regarding the delivery of interviews, in addition to handling the printed instrument, it was decided to record the answers, as mentioned by the elderly, in a Google Forms form. The following instruments were used: characterization of sociodemographic data using the Form created by the researchers; Rosenberg Self-Esteem Scale;¹⁰ Scale of Attitudes and Knowledge about Sexuality in Aging (ASKAS);¹¹ Sexual Quotient - Female Version (QS-F);¹² Sexual Quotient - Male Version (QS-M).¹³

The Rosenberg Self-Esteem Scale,¹⁰ is a Likert-type scale, with ten questions, of which five sentences have positive statements and the other five have negative statements. The final score varies between zero and 30 points and the lower the final score, the higher the self-esteem.¹⁰ The Attitudes and Knowledge about Sexuality Scale (ASKAS) is composed of 28 items, divided into two parts. The first assesses the elderly's knowledge about sexuality, with 20 items, whose alternative answers are: true = 1 point, false = 2 points and I don't know = 3 points, ranging between 20 and 60 points. The second assesses the attitude towards sexuality of the elderly, with eight items, on a five-point Likert scale, ranging from “strongly disagree” to “strongly agree” ranging between 8 and 40 points.¹¹ In the first part of the scale, which assesses knowledge, a low score means high knowledge about sexuality in old age, and; in the second part that assesses attitudes, a low score indicates a less conservative or more favorable attitude towards older people's sexuality.¹⁴

The Sexual Quotient - Female Version (QS-F) consists of 10 questions, distributed across the following domains: sexual desire and interest, foreplay, personal arousal and harmony with the partner, comfort and orgasm and satisfaction.¹² The scale validated in Brazil,¹⁵ was used, in which each question has a score ranging from zero to five points. The total score must be multiplied by two, resulting in a score between zero and 100 points. The higher the score, the greater the sexual satisfaction/performance, with zero to 20 points being considered null or bad; 22 to 40 points, poor to unfavorable; 42 to 60 points, unfavorable to fair; 62 to 80 points, fair to good; 82 to 100

points, good to excellent.¹⁵ The Sexual Quotient - Male Version (QS-M) was used to evaluate male sexual function, considering: desire, confidence, quality of foreplay, satisfaction with the partner; erection quality; ability to reach orgasm; sexual satisfaction.¹⁶ The scale validated in Brazil was used,^{13,16} in which each question has a score ranging from zero to five points. The total score is obtained similarly to the QS-F.

The study variables were: sex (female and male); age group, in years (60|70, 70|80, 80 years and over), marital status (never married or cohabiting, married or living with a partner, separated/ divorced/ widowed; unknown), education, in years of study (complete primary education, incomplete secondary education/incomplete technical course, complete secondary education/complete technical course, incomplete higher education, education complete higher education, incomplete postgraduate degree, complete postgraduate degree); family income, in minimum wages (less than 2 minimum wages, 2|-4, 4|-6, 6|-8, 8|-10, 10|-12, 12|-14, 14|-16, 16|-18, 18 or more, don't know/don't want to answer); color or race (black, brown, white, yellow, indigenous); religion/belief; self-esteem score; score of attitudes and knowledge about sexuality in aging; sexual satisfaction/performance (null or bad; bad to unfavorable; unfavorable to fair; fair to good; good to excellent). After collection, the data spreadsheet generated by Google Forms was exported to the Excel® program. The final database was imported into GNU PSPP Statistical Analysis Software version 1.0.1, for analysis.

Statistical analysis was performed using absolute frequencies and percentages for categorical variables, and measures of centrality (mean or median) and dispersion (standard deviation or minimum and maximum) for numerical variables.

t - student test and Spearman correlation were used. The significance level (α) was 95% and tests were considered significant when $p < \alpha$.

A presente pesquisa, pautada na Resolução CNS 466/12, foi aprovada pelo Comitê de Ética em Pesquisa com Seres Humanos da Universidade Federal do Triângulo Mineiro com o parecer 4.342.951. Antes do início da entrevista foi lido aos idosos os objetivos, o Termo de Consentimento Livre e Esclarecido e prestadas as informações pertinentes. Após a anuência do entrevistado por meio do contato telefônico, foi conduzida a entrevista.

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Results

Among the 218 elderly people, there was a higher percentage of females (61.9%), married (45.8%), with incomplete primary education (64.7%), family income lower than two minimum wages (42.7%), being self-declared white (55.6%) and Catholic (65.4%). The average age of the participants was 74.3 (SD=7.97).

Self-esteem presented a mean of 8.54 (SD=4.89), indicating it was high. Regarding knowledge about sexuality, the average score was 35.67 (SD=10.14), demonstrating high knowledge. Regarding attitude, the average score was 19.81 (SD=6.03), denoting a less conservative attitude towards sexuality.

Regarding sexual satisfaction/performance, among women, the majority reported it as unfavorable to regular and men as good to excellent, Table 1. Only 36.2% mentioned having sexual intercourse in the last six months prior to data collection, Table 1.

Table 1 Frequency distribution of variables related to sexual function

Variables	N	%
Sexual intercourse in the last 6 months		
Yes	79	36.2
No	139	63.8
Sexual Quotient Female version-QSF - sexual satisfaction/performance		
Null/Bad	1	4.2
Bad to unfavorable	two	8.3
Unfavorable to regular	11	45.8
Fair to good	4	16.7
Good to excellent	6	25
Sexual Quotient Male version-QSM - sexual satisfaction/performance		
Null/Bad	two	3.6
Bad to unfavorable	1	1.9
Unfavorable to regular	7	12.7
Fair to good	15	27.3
Good to excellent	30	54.5

Elderly men ($\mu=31.65$; $SD=7.27$) had better knowledge about sexuality compared to elderly women ($\mu=38.13$; $SD=10.87$) ($p < 0.001$), and; less conservative attitude ($\mu=18.11$; $SD=25.67$) than women ($\mu=20.86$; $SD=6.02$) ($p = 0.001$).

Greater knowledge about sexuality was related to younger age, higher self-esteem and greater sexual satisfaction/performance among men, Table 2.

The most favorable attitude towards sexuality was related to higher self-esteem, Table 2.

Table 2 contains data on the correlation of knowledge and attitudes, age, self-esteem and sexual satisfaction/performance.

Table 2 Frequency distribution of variables for correlation of knowledge and attitudes, age, self-esteem and sexual dysfunction

ASKAS		Age	Self esteem	QSF	QSM
Knowledge	r	0.29	0.144	-0.18	-0.518
	P	0	0.033	0.399	0.000
Attitude	r	0.291	0.342	-0.374	-0.095
	P	0.000	0.000	0.072	0.492

Discussion

In the present research there was a predominance of females, a similar result was found in studies carried out in Rio Grande do Sul (61.5%);¹⁷ (60.9%),¹⁸ and with British elderly people (51.6%).¹⁹ The higher percentage of elderly women in these studies is a result of the higher life expectancy for females. Most participants were married, as evidenced in national surveys (64%),¹⁸ (58.3%),²⁰ and international (41.9%),¹⁹ carried out with elderly people. In this aspect, scientific literature shows that marriage increases marital quality and has a positive impact on the physical and mental health of the spouses.²¹

Regarding education, there was a predominance of elderly people with incomplete primary education, similar to what was found in a study carried out in Rio Grande do Sul (65%).¹⁸ The data is in accordance with the Brazilian Confederation of Retirees, Pensioners and Elderly People (COBAP), which states that around 50% of the elderly population in Brazil only has primary education, that is, they only attended grades 1 to 8.²² Family income of less than two minimum wages is higher than that obtained in a population-based study carried out with elderly co-residents in Salto da Divisa-MG, in which 81.4%

of respondents received up to one minimum wage.⁹ These results may be associated with the low frequency of elderly people entering the job market, making retirement an exclusive income.²³ Regarding race, consistent data was obtained in a study carried out in the city of Santiago-RS in which 90.7% declared themselves to be white.¹⁷ The division of elderly people by self-declared color highlights important economic and historical issues in Brazil. Regarding religion, the results corroborate a study carried out with elderly people living in Brazilian territory, in which 56.6% reported being Catholic,²⁴ (73.6%).²⁵ This data may be related to family creation based on religion, a factor that contributes to its continuity throughout life,³¹ in addition to helping to provide social support for the elderly.

Regarding self-esteem, a similar result was found in a population-based study carried out with elderly people living in a city in the interior of Bahia, in which there was a predominance of high self-esteem in 96.9%.²⁶ High self-esteem in old age makes the elderly feel respected, safe, recognized, independent and worthy of happiness,⁹ which can favor the experience of sexuality.

Regarding sexual satisfaction/performance, the opposite result was found in a population-based study carried out in the city of São Paulo, in which elderly women reported being sexually inactive, but 64.5% satisfied.²⁷ It is evident that some prejudices regarding the sexuality of the elderly still remain, materialized through social taboos that most often affect women.²⁸ However, it is clear that women themselves experience difficulties expressing their sexuality. For men, a similar result was obtained in which the majority reported being sexually active and satisfied (58.5%).²⁷ Getting older does not mean stagnating sexually, but giving new meaning to the experience of sexuality.²⁹ Regarding knowledge about sexuality, a similar result was found in a study carried out in Poland where elderly people showed high knowledge about sexuality;³⁰ Regarding attitude, they obtained a less conservative attitude,³⁰ consistent with what was obtained in the findings of this research. Sexual pleasure does not end with advancing age, and sexuality is present throughout life.³¹ In this sense, it is important that health services discuss these aspects through educational activities, with a view to broadening the perspective on this topic.

The comparison of knowledge about sexuality between the sexes showed similar results in a survey carried out with Polish elderly people, which knowledge scores were significantly higher for males, as was greater sexual satisfaction/performance.³⁰ Another study in a municipality in rural Pernambuco showed that elderly women had less sexual experience, in addition to low sexual satisfaction.²⁸ Issues relating to the sexual act and sexuality itself are more common among men, who were more socially encouraged to speak and act with greater autonomy in the field of sexuality.³⁶ When comparing sexual attitudes, the opposite result was found in a study carried out with elderly people in Poland, in which elderly women had less conservative attitudes.³⁰ Men demonstrated that they attach greater importance to sexual life, and continued to be sexually active as they aged.³² These data highlight the need to reflect on the experience of sexuality, especially among women. The nurse can, in nursing consultations, allow discussion of this subject, with a view to minimizing the negative impact of experiencing this stage of life in a satisfactory way. The greater knowledge about sexuality related to age differed from that obtained from research in Recife-PE, in which the level of knowledge of elderly people in relation to sexuality had no significant association with the age variable. It is important that elderly people are educated about feelings of fear and anguish that have a harmful effect on sexual activity, and shame on their own bodies due to their age.³³

In the present study, greater knowledge about sexuality was related to higher self-esteem, consistent with research carried out in Vitória da Conquista-BA, in which elderly people reported that sexuality is related to well-being and vanity. The experience of sexuality in older adults is not only linked to sex itself, but to self-care and self-esteem.³⁴ Psychological and physiological changes can affect the self-esteem of older adults, contributing to disinterest or fatigue.³⁴ On the other hand, self-esteem can help in understanding and experiencing the aging process.⁹ Therefore, it is understood that the provision of information by health professionals and services and discussion of these aspects can help with knowledge, making this moment more pleasurable and unique.³⁵ It is necessary for the nursing team to have a holistic look at this population, beyond physiological disorders, since self-esteem is related to the elderly person's quality of life, thus dissociating it from fragmented and mediatized care.²⁴ Greater knowledge about sexuality related to greater sexual satisfaction/performance among men is consistent with a study carried out in Pernambuco, in which issues involving sex and sexuality themselves were more permissive to men. They are encouraged to speak and act more freely regarding their sexuality.³⁶

For elderly women, these topics were not allowed or were a source of shame. It is necessary to break these beliefs and build new meanings that favor the behavior of the elderly, making them more active. Health professionals and other areas can help with this topic by creating environments for discussion, groups, lectures, as well as training and research that contribute to professional improvement.³⁶ The relationship between a more favorable attitude towards sexuality and higher self-esteem was evidenced in transnational qualitative study which demonstrated that self-esteem affects sexual practice.³³ Self-esteem is seen as the affection that a person feels for themselves, it is correlated with self-evaluation, which can influence their capabilities and performance.⁸ Thus, low self-esteem is a precursor to sexual disorders, with women who report dissatisfaction with their bodies, low sexual frequency or absence are the most susceptible to having impairments in sexual function and satisfaction.³⁷ It is noteworthy that the way in which interpersonal relationships are configured in the elderly's home environment can constitute protective factors for greater self-esteem.⁹ In this way, it is understood that elderly people with high self-esteem can relate better to their partner, and this aspect can be investigated in health services.

Conclusion

The results of this research allowed us to conclude that the average age of the elderly was 74.3 (SD=7.97), the majority of participants were female, married, with incomplete primary education, family income lower than two minimum wages, being self-declared white and of Catholic religion. The data revealed that the elderly had high self-esteem, high knowledge about sexuality and a less conservative or more favorable attitude towards sexuality in old age. With regard to knowledge, only men have high knowledge about sexuality when compared to women; It was also possible to verify that men demonstrate a less conservative or more favorable attitude towards sexuality compared to elderly women. Finally, the study also showed that there is a relationship between greater knowledge about sexuality and younger age, higher self-esteem and greater sexual satisfaction/performance among men. A more favorable attitude towards sexuality was related to higher self-esteem.

Despite the physiological changes, it became evident that the need to experience sexuality is present even as we age, demystifying the idea of asexual elderly people. Therefore, it is necessary for health professionals, especially nursing professionals, to discuss and

encourage elderly people to talk about sexuality. The need to raise awareness among women stands out, as with this research it was possible to realize that they have greater difficulty expressing their sexuality, often due to preconceptions acquired over the years. It is essential that professionals address this topic during consultations with a view to improving the sexual experience in old age, in addition to implementing actions to promote sexual health, focusing on the prevention of STIs in the elderly population, encouraging the use of condoms, carrying out listening active on the topic of sexuality with the elderly, thus developing comprehensive care for this population.

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Conflicts of interest

The authors declare no conflicts of interest of any nature.

References

1. Veras ML. Aging process: an elderly perspective. *Interdisciplinary journal*. 2015;8(2):113–122.
2. Feliciano A, Galinha SMGA. Elderly perceptions of sexuality in advanced ages – exploratory study. *UIIPS Magazine*. 2017;5(3):160–169.
3. Santos NFV. Health education actions on sexuality with the elderly. *Saúde em Redes*. 2017;3(2):162–171.
4. Graf AS, Patrick JH. The influence of sexual attitudes on mid-to late-life sexual well-being: Age, not gender, as a salient factor. *The International Journal of Aging and Human Development*. 2014;79(1):55–79.
5. Braga MIA, Franzmann UT, Fontenele RM, et al. Production of knowledge about the vulnerability of the elderly to exposure to HIV/AIDS. *Research, Society and Development*. 2020;9(11):3789119989.
6. Santos MC, Nunes R, Cruz GHS, et al. Perceptions and experiences of elderly people about their sexuality. *Multidisciplinary research almanac*. 2017;4(1).
7. Aguiar RB, Leal MCC, Marques APO, et al. Knowledge and attitudes about sexuality in elderly people with HIV. *Science & Public Health*. 2020;25(6):2051–2062.
8. Carvalho JC, Lima M, Zimmermann RD, et al. Sexuality and body image in elderly women: integrative review: Sexuality and a body image in elderly. *Current Nursing Magazine In Derme*. 2020;92(30).
9. Meira SS. Self-esteem and factors associated with social conditions in the elderly. *Research Journal Care is Fundamental Online*. 2017;9(3):738–744.
10. Dini GM, Quaresma MR, Ferreira LM, et al. Cultural adaptation and validation of the Brazilian version of the Rosenberg self-esteem scale. *Rev Soc Bras Cir Plastic*. 2004;19(1):41–52.
11. Viana HB, Madruga VA, Guirardello EB, et al. Adaptation and validation of ASKAS – aging sexual knowledge and attitudes scale in Brazilian elderly people. *Revista Kairós Gerontologia*. 2012;15(8):99–125.
12. Polizer AA, Alves TMB. Profile of sexual satisfaction and function of elderly women. *Physioter Mov*. 2009;22(2):151–158.
13. ABDO CHN. The male sexual quotient: A brief, self-administered questionnaire to assess male sexual satisfaction. *J Sex Med*. 2007;4(4):382–389.
14. Viana HB, Guirardello EB, Madruga VA, et al. Translation and cultural adaptation of the ASKAS Scale – aging knowledge and attitudes scale in Brazilian elderly people. *Texto Contexto Enferm*. 2010;19(2):238–245.

15. Najjar CHA. Preparation and validation of the sexual quotient – female version: a scale to assess women’s sexual function. *Rev Bras Med.* 2006;6(9):477–482.
16. Najjar CHA. Preparation and validation of the sexual quotient – male version: a scale to assess men’s sexual function. *Rev Bras Med.* 2006;63(1-2):42–46.
17. Menges APN, Ceni GC, Dallepiane LB, et al. Factors associated with income and education in overweight elderly people. *Brazilian Journal of Development.* 2020;6(9):65997–66011.
18. Gross CB. Frailty levels of elderly people and their association with sociodemographic characteristics. *Acta Paulista de Enfermagem.* 2018;31(2):209–216.
19. Towler LB. Older adults’ embodied experiences of aging and their perceptions of societal stigmas toward sexuality in later life. *Social Science & Medicine.* 2021;287.
20. Souza Junior EV. Sexuality is associated with the quality of life of the elderly. *Brazilian Nursing Journal.* 2021;74.
21. Goulart SA. Factors related to long-term marriages: overview from an integrative review. *Psycho.* 2019; 50(2):30370.
22. Oliveira M. Education of the elderly in Brazil is very low. *Brazilian Confederation of Retirees, Pensioners and Elderly People.* 2022.
23. Manso MEG. Self-declared skin color and functional capacity in a group of elderly people attending a coexistence center in the city of São Paulo. *Longeviver Magazine.* 2020.
24. Souza Júnior EV. Is self-esteem associated with the quality of life of elderly people?. *Brazilian Nursing Journal.* 2022;(75).
25. Oliveira NR, Porto EF. Sociodemographic, health profile and lifestyle habits of long-lived elderly people in a municipality in the interior of Bahia. *Research, Society and Development.* 2021;10(3):1–11.
26. Soares LR. Self-esteem and self-image in elderly people in a city in the interior of Bahia. *Health (Santa Maria).* 2021;47(1).
27. Rodrigues CFC. Sexual activity, satisfaction and quality of life in elderly people. *Electronic nursing magazine.* 2019;(21).
28. Iara B, Lisbon RO, Nunes RL, et al. Women’s sexuality in old age. *Brazilian Interdisciplinary Health Journal.* 2021.
29. Cabral NES. Understanding of sexuality by elderly men in rural areas. *Bahia Nursing Magazine.* 2019; (33).
30. Cybulski M, Cybulski L, Krajewska Kulak E, et al. Sexual quality of life, sexual knowledge, and attitudes of older adults on the example of inhabitants over 60s of Bialystok, Poland. *Front. Psychol.* 2018;(9):483.
31. Santos LDA. Religiosity and religious and spiritual coping of elderly people participating in a community center. *Science, Care and Health.* 2020;19.
32. Cambão M. QualiSex: study of the association between quality of life and sexuality in the elderly in a population in Porto. *Portuguese Journal of General and Family Medicine.* 2019;35(1):12–20.
33. Humboldt SV. How do older people express themselves sexually? A qualitative study. *Psychology, Health & Illness.* 2020;21(1):62–68.
34. Pinto MXR. Sexuality and aging: the perception of elderly people participating in a social group. *Physiotherapy Brazil.* 2019;20(1).
35. Monteiro Maria HL. Elderly sexuality amid risks and taboos: a literature review Sexuality of elderly people among risks and taboos: a literature review. *Brazilian Journal of Health Review.* 2021;4(4):14692–14704.
36. Santos IF. Attitudes and knowledge of elderly people about sexual intercourse in aging. *Psychology: Science and Profession.* 2022;(42).
37. Vasconcelos PPS. Negative genital self-image as a predictor of sexual disorders in women: physiotherapeutic possibilities. *Brazilian Journal of Human Sexuality.* 2021;32(2).