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Self-perception of sexual life and associated factors: a population study conducted in women aged 50 or more years

Autopercepção de vida sexual e fatores associados: estudo populacional em mulheres com 50 anos ou mais

Original Article

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Abstract

PURPOSE: To evaluate the prevalence of women aged 50 years or more who are sexually active and their self-perception with respect to their sexual lives. Associated factors were also assessed. **METHODS:** A cross-sectional, population-based, self-reported household survey involving 622 Brazilian women aged 50 years or more. Sociodemographic, clinical, and behavioral factors were evaluated. The sexual life self-perception was classified as very good, good, fair, poor, or very poor. Data were analyzed using the χ^2 test, Fisher's exact test, and Poisson multiple regression analysis. Prevalence ratios and their 95% confidence intervals were also calculated. **RESULTS:** Of the women in this sample, 228 (36.7%) reported having a sexual life and, of these, 53.5% classified it as very good or good, while 46.5% considered it fair, poor, or very poor. The bivariate analysis indicated that being postmenopausal (p=0.025) and using natural remedies to treat the menopause (p=0.035) were factors associated with the woman classifying their sexual lives as fair, poor, or very poor. Multiple regression analysis showed that more women who had used or were currently using natural remedies for the menopause scored their sexual lives as fair, poor, or very poor. **CONCLUSIONS:** More than half the women aged 50 years or more in this study were not sexually active. A poorer sexual life self-perception was associated with the use of natural remedies to treat menopausal symptoms. This may indicate a need to improve the way in which these women are evaluated and treated. Women's assessment of their own sexual lives may prove a useful tool in clinical practice.

Resumo

OBJETIVO: Avaliar a prevalência de vida sexual em mulheres de 50 anos de idade ou mais, assim como avaliar sua autopercepção em relação à vida sexual e os fatores associados. **MÉTODOS:** Estudo transversal de base-populacional, por meio de autorrelato em pesquisa domiciliar, envolvendo 622 mulheres brasileiras de 50 anos de idade ou mais. Fatores sociodemográficos, clínicos e comportamentais foram avaliados. A autopercepção da vida sexual foi classificada como muito boa, boa, regular, ruim ou muito ruim. Os dados foram analisados usando-se o teste do χ^2, o teste exato de Fisher e a análise de regressão múltipla de Poisson. As razões de prevalência e seus intervalos de confiança de 95% foram calculados. **RESULTADOS:** Das mulheres nesta amostra, 228 (36,7%) relataram ter vida sexual e, destas, 53,5% classificaram-na como muito boa ou boa, enquanto 46,5% consideraram-na regular, ruim ou muito ruim. A análise bivariada indicou que estar na pós-menopausa (p=0,025) e usar remédios naturais para tratamento da menopausa (p=0,035) foram os fatores associados com a classificação da vida sexual pelas mulheres como regular, ruim ou muito ruim. A análise de regressão múltipla mostrou que mulheres que tinham usado ou usavam atualmente remédios naturais para o tratamento da menopausa classificaram sua vida sexual como regular, ruim ou muito ruim. **CONCLUSÕES:** Mais da metade das mulheres de 50 anos de idade ou mais não referiram vida sexual. Uma pior autopercepção da vida sexual foi associada com o uso de remédios naturais para o tratamento da menopausa. Isso pode indicar a necessidade de melhorias na avaliação e no tratamento dessas mulheres. Pode ser útil na prática clínica a autoavaliação da vida sexual pelas mulheres.

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Introduction

Adverse changes in sexual functioning may affect quality of life and account for emotional distress. When problems of sexual function are have a short duration, they may generate frustration and anguish; however, when chronic, they may lead to anxiety and depression, damaging relationships or creating difficulties in other areas of an individual's life.

Female sexual dysfunction is known to be multidimensional with biological, psychological, and interpersonal determinants[1]. At menopause, dramatic decreases in circulating estrogen levels cause physiological changes that contribute to the development of annoying symptoms including hot flushes, night sweats, mood swings, insomnia, lethargy/fatigue, and irritability[2]. In addition, estrogen deficiency may also lead to reduced vaginal blood flow and symptoms of vulvar and vaginal atrophies and dyspareunia. Therefore, the hormonal changes experienced during menopause may affect directly or indirectly the sexual function[3].

Estrogen therapy (ET), with or without a progestogen, is the most effective treatment for menopause-related vasomotor symptoms and their potential consequences, such as diminished sleep quality, irritability, concentration difficulty and a subsequently diminished quality of life[4]. ET is also the best choice to treat severe symptoms of vulvar and vaginal atrophies (e.g. vaginal dryness, dyspareunia, and atrophic vaginitis)[5,6]. On the other hand, if left untreated, these symptoms may impair sexual function.

In a cross-sectional study conducted in Brazil, the state of being in the menopausal transition or postmenopause was found to be associated with poorer sexuality[7]. Additionally, a longitudinal study carried out in Australia found that all sexual function aspects in women deteriorated during the menopausal transition[8]. Other non-hormonal factors that negatively affect sexual function are: presence of comorbidities, medication use, poor self-perception of health status, sedentary lifestyle, smoking, and being over 50 years old[7,8].

The fact that women are now living longer presents a range of challenges to those who provide integrated healthcare. In order to offer adequate support, health professionals require further information on women's sexual function within the aging process. Thus, there are well-established instruments for evaluating the various aspects of sexual function, including the McCoy Female Sexuality Questionnaire (MFSQ)[9], the Female Sexual Function Index (FSFI)[10], and the Short Personal Experiences Questionnaire (SPEQ)[11]. In a previous study conducted with women aged 40 to 65 years and with 11 years of schooling[12], a version of the SPEQ adapted and validated for use in Brazil[13] was applied to evaluate the sexual dysfunction. Nevertheless, evaluating women with female sexual dysfunction in clinical trials remains difficult. Part of the challenge is to develop meaningful and valid endpoints that capture the complexity of women's sexual response. In these circumstances, self-perception may be useful in explaining behavior and interpreting experiences, as well as for predicting future issues[14]. Such observations would generate useful data, as it has already been shown in a variety of situations[15,16].

Consequently, more attention has been given to an individual's self-perception of objective states in many healthcare fields, since self-perception may predict a variety of outcomes including the use of healthcare services, emotional distress, morbidity, and mortality[17]. Positive self-perception should be reinforced, because it is strongly associated with better adjustment to the changes that occur in old age, resulting in a better quality of life irrespective of the individual's actual life conditions[18]. Therefore, the objectives of this present population-based study were to evaluate a group of Brazilian women aged 50 years or more with respect to whether or not they were sexually active, their self-perception of that sexual life, and the impact of associated factors.

Methods

A cross-sectional, population-based study was conducted between May 10 and October 31, 2011 in the city of Campinas, São Paulo, Brazil. The present study is part of a broader one involving the health of women over 50 years of age. A total of 68 census sectors in the municipality, which were the primary sampling unit, was selected by simple random sampling (SRS) or equal probabilities of selection. For this process, a table of random numbers was generated based on a list of the sectors as provided by the Brazilian Institute of Geography and Statistics (IBGE)[19].

The census sectors were further chosen by listing the number of women of at least 50 years of age (participants who are eligible for inclusion in the study). Sectors with less than ten women in this age group were clustered with the neighboring, sequentially numbered sector. Guided by maps of each census area, research assistants visited the odd-numbered homes and verified whether there were any women aged 50 years or more living there. If there were eligible ones residing at that address, they were invited to participate in the study. In the event of agreement, a questionnaire was personally applied by interviewers trained at the Centro de Pesquisas em Saúde Reprodutiva de Campinas (CEMICAMP). Interviews were conducted until ten eligible women were enrolled in each sector. If it is impossible to reach this number (ten per sector), the research assistants resumed work in that sector by

inquiring in the addresses that were not previously visited. Overall, 721 women were invited to participate in the study and 99 (13.7%) declined. Therefore, 622 women were enrolled, 228 of whom reported being sexually active. These subjects were evaluated with respect to their sexual lives self-perception.

The target population was composed of female residents from the city of Campinas in the state of São Paulo, Brazil, which in 2007 consisted of 131,800 women aged 50 years or more[19]. The sample size was calculated based on the sexual dysfunction frequency of 35.9% for the female population aged 40 to 65 years in Brazil[12]. It was later measured to assess the accuracy reduction of a sample with 228 women, presenting a margin of error (absolute difference) of approximately 6.2% between the proportions of the study sample and the general population.

Inclusion criteria consisted of women aged 50 years or more. It was excluded from the study women with any factors that rendered the interview impossible, such as disease, insufficient cognitive ability to answer the questionnaire, commitments, time incompatibilities, among others.

A questionnaire was designed to deal with women's self-perception of their sexual lives and to collect data on their sociodemographic, clinical, reproductive, and behavioral characteristics. Self-perception was defined as how the woman expressed herself with respect to her own sexual life.

The independent variables analyzed were: age (years); education years (0=≤8, 1=>8 years); marital status (1=no partner and 0=with a partner); ethnicity/skin color (1=white and 0=others); monthly income (0=<US$750 and 1=≥S$750); body mass index (BMI) at 20 to 30 years of age (kg/m^2); current BMI (kg/m^2); smoking habits (0=never smoked; 1=past or current smoker); number of cigarettes/day (0=≤4 and 1=≥5); consumption of alcohol (yes/no); frequency of alcohol consumption (0=none or less than once a week; 1=≥once a week or more); weekly practice of physical exercises (yes/no); frequency of physical exercises (0=twice a week or less; 1=≥three times a week); medical insurance (yes/no); cessation of menstrual periods for at least 12 months (yes/no); menopause diagnosed by a physician (yes/no); past or current menopause treatment (yes/no); past or current hormone therapy – HT (yes/no); past or current use of natural or alternative remedies for menopause (yes/no); and number of morbidities (0=≤1 and 1=≥2).

The research protocol was approved by the Internal Review Board of the School of Medicine, Universidade Estadual de Campinas (UNICAMP).

Firstly, the number of women declaring that they were sexually active was established. After doing this, a bivariate analysis evaluated the women's self-perception of their sexual lives as a function of the independent variables. The χ^2 test was applied, followed by Yates' correction or Fisher's exact test[20]. Poisson's multiple regression analysis was used in the model to calculate the prevalence ratios (PR) and their respective 95% confidence intervals (95%CI)[21], with the backward criterion strategy to select the variables[22]. For this analysis, the strata and cluster/smallest geographical units of the sampling plan were used. The Stata software package, version 7.0 (Stata Corporation, College Station, Texas, USA), was applied in the analysis. The criterion for the inclusion of independent variables in the multiple regression analysis consisted of $p<0.25$ in the bivariate analysis performed with simple logistic regression. P-values ≤0.05 were considered statistically significant.

Results

Of the 622 women interviewed, 228 (36.7%) reported having a sexual life and, of these, 53.5% classified their sexual lives as very good or good, while 46.5% classified them as fair, poor, or very poor.

In this sample of women aged 50 years or more who had a sexual partner, 58.8% were between 50 and 59 years of age and 41.2% were 60 years of age or older. Regarding education, 64% had less than eight years of formal education. Most of the women (87.2%) lived with a partner, 68% were white, and 37.6% had a monthly income lower than US$750 (data not shown in tables).

The bivariate analysis showed that being postmenopausal ($p=0.025$) and using or have used natural remedies ($p=0.035$) to treat menopause were the only factors associated with a self-classification of the woman's sexual life as very poor, poor, or fair (Tables 1 to 3). Poisson's multiple regression analysis presented a 1.38 PR (95%CI 1.06–1.81; $p=0.020$) for the association between women classifying their sexual lives as very poor, poor or fair and using or who have used natural remedies for the treatment of menopausal symptoms (data not presented in tables).

The predictive variables taken into consideration were: education; marital status; skin color/ethnicity; monthly income; BMI at 20 to 30 years of age (kg/m^2); current BMI (kg/m^2); smoking; number of cigarettes per day; alcohol consumption; frequency of alcohol consumption; weekly practice of physical exercises; frequency of physical exercises; medical insurance; cessation of menstrual periods for at least 12 months; menopause diagnosed by a physician; menopause past or current treatment; past or current hormone therapy; past or current use of natural or alternative remedies for the menopause; and number of morbidities.

Table 1. Self-evaluation of women's sexual life according to their sociodemographic characteristics: bivariate analysis

Variables	Self-perception of sexual life		n	p-value*
	Very good, good	Fair, poor, very poor		
Age (years)				0.485
50–59	56.0	44.0	134	
60–69	47.9	52.1	73	
≥70	57.1	42.9	21	
Schooling (years)				0.577
≤8	52.1	47.9	146	
>8	56.1	43.9	82	
Marital status				0.185
No partner	65.5	34.5	29	
Partner	52.0	48.0	198	
Skin color/ ethnicity				0.417
White	51.6	48.4	153	
Others	56.9	43.1	72	
Monthly income				0.370
≤750 USD	46.7	53.3	60	
>750 USD	55.4	44.6	83	

*χ^2 test considering sampling plan – census sector (primary sampling unit).

Table 2. Self-evaluation of women's sexual life according to certain behavioral variables: bivariate analysis

Variables	Self-perception of sexual life		n	p-value*
	Very good, good	Fair, poor, very poor		
BMI (kg/m²) at 20 to 30 years of age				0.534
<20.0	47.5	52.5	59	
20.0–24.9	55.2	44.8	105	
≥25.0	47.4	52.6	19	
Current BMI (kg/m²)				0.949
<25.0	52.5	47.5	61	
25.0–29.0	52.1	47.9	71	
≥30.0	54.5	45.5	66	
Smoking				0.382
Never smoked	53.6	46.4	153	
Past smoker	46.9	53.1	49	
Current smoker	65.4	34.6	26	
Number of cigarettes per day				0.594
None or ≤4	54.0	46.0	176	
≥5	50.0	50.0	48	
Alcohol consumption				0.247
Yes	61.0	39.0	41	
No	51.9	48.1	187	
Frequency of alcohol consumption				0.235
None or less than once a week	52.2	47.8	205	
Once a week or more	65.2	34.8	23	
Weekly physical activity				0.890
Yes	53.0	47.0	100	
No	53.9	46.1	128	
Frequency of physical activity				0.922
≤2 days/week	53.3	46.7	152	
≥3 days/week	53.9	46.1	76	

BMI: body mass index; *χ^2 test considering sampling plan – census sector (primary sampling unit).

Discussion

The objective of the present study was to assess the prevalence of women aged 50 years or more who reported having a sexual life, as well as to evaluate the associated factors. Most of the women (63.3%) stated that being not sexually active and those who said the opposite, almost half of them classified it as fair, poor, or very poor. In agreement with these findings, another study conducted in the United States with a population aged 57 to 85 years showed that sexual activity declined with time: 73% of the respondents aged 57 to 64 years were sexually active compared to 53% of those aged 65 to 74 years and 26% of respondents aged 75 to 85 years. Of those who were sexually active, about half the women reported at least one distressing sexual problem[23].

Bivariate analysis indicated that being postmenopausal (p=0.025) was associated with a fair, poor, or very poor sexual life self-perception. As menopause is characterized by declining estrogen levels, which may lead to the development of symptoms that include hot flashes, night sweats, vaginal dryness, mood swings, insomnia, lethargy/fatigue, and irritability[2], this may explain the deterioration in women's sexual life as reported in other studies[7,24,25]. Another factor associated with women's self-classification of their sexual life as very poor, poor or fair was current or past use of natural remedies to treat menopausal symptoms (p=0.035). This was the only associated factor identified in the multiple regression analysis. Nevertheless, it should be remembered that only 16% of the women used this kind of therapy to treat menopausal symptoms and that this category of treatment included many different forms of natural and alternative remedies, such as soy isoflavones, natural herbs, and dietary supplements.

HT is the treatment of choice for the relief of the physical symptoms associated with an estrogen-deficient menopausal state. It may indirectly exert a positive effect on sexual function, as women may feel better because of this treatment. In addition, there is a direct effect on vaginal and vulvar atrophies. Treatment other than HT tends to be less effective or completely ineffective[26,27].

Table 3. Self-evaluation of women's sexual life according to certain variables related to medical care: bivariate analysis

Variables	Self-perception of sexual life		n	p-value*
	Very good, good	Fair, poor, very poor		
Private medical insurance				0.280
Yes	57.1	42.9	119	
No	49.5	50.5	109	
Cessation of menstrual periods for at least 12 months				0.025
Yes	51.0	49.0	200	
No	71.4	28.6	28	
Age at menopause (years)				0.317
≤39	57.1	42.9	21	
40–49	45.3	54.7	86	
≥50	55.2	44.8	87	
Menopause diagnosed by a physician				0.132
Yes	49.6	50.4	137	
No	60.0	40.0	90	
Past or current use of treatment for menopause				0.719
Yes, current use	47.1	52.9	34	
Yes, past use	52.9	47.1	68	
No	55.2	44.8	125	
Past or current use of hormone therapy				0.812
Yes	54.2	45.8	83	
No	52.4	47.6	143	
Past or current use of alternative or natural remedies to treat menopause				0.035
Yes	38.9	61.1	36	
No	55.8	44.2	190	
Time of treatment (months)				0.248
≤12	57.1	42.9	21	
13–48	34.8	65.2	23	
>48	52.9	47.1	51	
Number of morbidities				0.053
≤1	60.6	39.4	109	
≥2	46.9	53.1	113	

*χ^2 test considering sampling plan – census sector (primary sampling unit).

Phytoestrogen and extracts including isoflavones and lignans seem to exert only a minimal effect on hot flashes, while the result of other commonly used forms of complementary and alternative medicine (CAM) for menopausal symptoms remains unconvincing[28].

Moreover, it has been hypothesized that alternative remedies such as phytoestrogens used for menopausal symptoms treatment may be endocrine disruptors. In vitro assays have found that, although most phytoestrogens bind to both ERα and ERβ, and activate ER-dependent gene transcription through both subtypes, they generally have a higher relative binding affinity for ERβ rather than ERα. In this case, it is possible that ERβ is more efficient than ERα at recruiting coactivators, therefore the use of these remedies may suppress female sexual behavior[29,30].

The present study is part of a broader one that dealt with the health of women over 50 years of age and its findings are subject to some limitations. It was based on unweighted data; hence, the results should be treated with caution when compared with estimates found in other studies. Furthermore, this is a cross-sectional analysis that does not permit a causal relationship to be established between independent variables and women's self-perception of their sexual lives. The fact that self-reporting was used to evaluate women's perception of their sexual lives may constitute a limitation.

Notwithstanding, although recall bias cannot be ruled out, previous studies using self-reports suggest a high validity with respect to data obtained through self-perception, through an individual's ability to respond differentially to his own behavior and its controlling variables[14]. Indeed, this technique has been shown to be useful for evaluating several health areas[15,16]. With respect to the adaptation of the SPEQ to Brazilian Portuguese, the validity criteria analysis showed significant correlation coefficients between the scores obtained in the women's self-classification of their sexual life and the SPEQ[13]. Given its population-based nature, the importance of the present study should be also emphasized.

Conclusions

The majority of the women in this population-based study were not sexually active and almost half of those who had a sexual life rated it as unsatisfactory. Current or past use of natural remedies to treat menopausal symptoms was associated with the fact that the woman had a poorer perception of her sexual life. The importance of adequately treating menopausal women should be emphasized to ensure that symptoms resulting from estrogen deprivation do not exert a negative effect on their sexual lives.

Another advantage is that asking women directly about how they perceive their sexual lives may create new concepts with operational definitions, which would be meaningful to both the investigators and the women surveyed with particular attention being paid to the women's own views and concerns. Thus, it would enable appropriate health strategies to be developed for promoting and safeguarding the sexual health of women throughout the aging process.

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