

ORIGINAL RESEARCH—EPIDEMIOLOGY

Sexual Behaviors among Older Adults in Spain: Results from a Population-Based National Sexual Health Survey

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ABSTRACT

Introduction. The Spanish National Sexual Health Survey (SNSHS) is designed to examine sexual activity, sexual behaviors, and sexual health among the Spanish population.

Aim. To describe sexual activity and behaviors of Spaniards aged ≥ 65 years old focusing on gender differences.

Methods. A population-based descriptive study was conducted using individual data from the SNSHS. The number of subjects aged ≥ 65 years included was 1,939 (1,118 women, 821 men).

Main Outcome Measures. Sexual activity, frequency, sexual behaviors, sexual practices, and reasons for lack of sexual activity were assessed from questions included in the survey. Subjects who reported having any sexual practice including giving or receiving kissing and hugging, vaginal intercourse, oral sex, or masturbation, with at least one partner in the previous 12 months were considered as sexually active. We analyzed sociodemographic characteristics, self-rated physical and sexual health, comorbid conditions, and medications using multivariate logistic regression models.

Results. Overall, 62.3% of men and 37.4% of elderly women were sexually active ($P < 0.01$). The prevalence of sexual inactivity significantly increased with age ($P < 0.01$, odds ratio [OR] 5.8, 95% confidence interval 3.8–9.05 men; 6.37, 3.9–10.4 women). Not having a partner was a predictor of sexual inactivity (OR 5.79, 3.98–8.42 men; OR 12.0, 8.4–17.2 women). Worse self-rated sexual health, suffering ≥ 2 comorbid conditions, and taking ≥ 2 medications were associated with higher probability of reporting no sexual activity in both men and women. The most common sexual practices were kissing, hugging, and vaginal intercourse. The most common reasons for sexual inactivity were: partner was physically ill (23%), lack of interest (21%), and the man was a widower (23%).

Conclusions. This study provided data on sexual activity in older Spanish adults and has identified potential factors that appear to influence sexuality in the elderly with some gender differences. Current results can have implications for healthcare providers for addressing these concerns in an effective manner. **Palacios-Ceña D, Carrasco-Garrido P, Hernández-Barrera V, Alonso-Blanco C, Jiménez-García R, and Fernández-de-las-Peñas C. Sexual behaviors among older adults in Spain: Results from a population-based national sexual health survey. J Sex Med 2012;9:121–129.**

Key Words. Sexual Behavior; Sexual Partners; Sexual Development; Aged; Aging

Introduction

Sexuality may be defined as the quality or state that comprises sexual desire, arousal, function and activity, physical satisfaction, and emotional

intimacy [1]. The knowledge about sexuality among the older population is now more important than even before. In Europe, the proportion of people older than 60 is expected to grow by 50% over the next 30 years [2]. In fact, sexual

expression in older people has been reported to be a predictor of general health [3] and medical care demand, and having a good sex life has been shown to enhance their quality of life [4]. Sexuality is an important part of life and general well being; nonetheless, its discussion tends to be neglected in the elderly [5].

Sexual activity has been mainly investigated in both middle-age and elderly combined surveys [6–13]. In the last years, the number of studies investigating sexuality exclusively in the elderly has increased [4,14–19]. A common belief is that sexual behavior and activity tends to decline with age [11,13]. Some studies reported decreasing trends in sexual activity [12,20], desire [19], functioning [21], and satisfaction [7,20] among the older population. In contrast, others have shown that elders remain sexually active in the latest decades of their life [8,10,22,23].

It seems that country [4], ethnic [22], and socio-cultural factors may influence interest and expectations about sexual activity [7,20]. Nevertheless, little is known about the sexual activity of the elderly population in Southern European countries [5,7,20]. In Spain, Fernández-Hernández et al. [24] reported that 21% of women aged >65 years maintained sexual intercourses, and 23.9% maintained their sexual desire. Moreira et al. [23] showed that Spanish men (88%) and women (66%) aged 40 to 80 years had engaged in sexual intercourse during the preceding 12 months, and that sexual interest and activity remained stable into middle age and beyond.

To the best of the authors' knowledge, there are no available data on the prevalence of sexual activity and behaviors in elderly Spanish people. Therefore, the aim of our study was to describe sexual activity and behaviors of Spaniards aged ≥ 65 years focusing on gender differences. We analyzed sexual activity, sexual partnerships, behaviors, sexual practices, and reasons for nonsexual intimacy using the Spanish National Sexual Health Survey (SNSHS).

Methods

An epidemiologic population-based descriptive study was conducted using individual data taken from the SNSHS. As the current analysis was conducted on a de-identified, public-use dataset, it was not necessary to get the approval of an ethics committee according to the Spanish legislation.

SNSHS

The SNSHS is a survey examining a nationwide representative sample of the civilian, noninstitu-

tionalized population aged ≥ 16 years. The SNSHS is conducted by the Centro de Investigaciones Sociológicas under the aegis of the Spanish Ministry of Health. The sampling procedure is multistage, stratified by conglomerates, with selection of primary sampling (cities) and secondary units (sections) following a proportional random method, and selection of the last units (subjects) by random routes and sex and age quotas.

The survey covered a total of 9,850 adults, and the estimated overall sample error was $\pm 1.01\%$. Information was collected by personal, home-based interviews using two methods: (i) information about sociodemographic features, comorbidities, and psychosocial attributes were collected via an interviewer-administered questionnaire; and (ii) respondents used a self-administered questionnaire to answer questions related to sexual practices regarding the first sexual experience and sexual relations over the previous 12 months. Data collection period started in November 2008 and finished in January 2009. Details of SNSHS methodology are described elsewhere [25].

Sexual Activity and Behaviors

From the SNSHS database, we selected subjects aged ≥ 65 reporting to be heterosexual for this study. To assess sexuality, we used several questions to create the dependent variables. We considered subjects who reported having any sexual practice with at least one partner in the previous 12 months as being "sexually active." Sexual practices included kissing and hugging, vaginal intercourse, oral sex, or masturbation. Among those active, frequency of sexual activity in the preceding year was classified into three categories: two times or more a week; two to four times a month; or once a month or less. Reasons for lack of sexual activity among those who had not practiced sex during the previous 12 months included: lack of sexual interest, I am physically ill, partner physically ill, widow/widower, did not want to, or other. Individuals can choose all reasons that they considered appropriate.

Sociodemographic Variables, Lifestyle Habits, and Comorbid Conditions

Sociodemographic characteristics, partnership, self-rated physical and sexual health over the previous 12 months, number of comorbid diseases (i.e., musculoskeletal, diabetes, cardiovascular, psychological disorders), and number of self-rated medications (i.e., diabetes, heart disease, high blood pressure) were analyzed as independent

variables. Within sociodemographic features, educational level was classified into: primary studies not started or not completed, primary studies completed, or secondary or higher studies completed. To identify those with a sexual partner, we used the answer (yes/no) to the following question: "Do you have currently a partner with whom you share an affective or sexual relationship that implies compromise and/or involves shared decision making and common goals?"

Individuals were asked to rate their physical health using a standard five-point scale, and this variable was dichotomized into two: very good/good and fair/poor/very poor. Self-rated sexual health was assessed with the following question: How do you self-perceive your sexual health status? Subjects could answer: very good, good, fair, poor, or very poor. This variable was also dichotomized into: very good/good and fair/poor/very poor.

Statistical Analysis

All analyses were separately conducted for men and women. First, we described the distribution and prevalence of elders sexually active in the last 12 months according to the study variables. Second, to assess predictors of not being sexually active, we conducted two unconditional logistic

regression multivariate models. Third, we described the prevalence of habitual sexual practices in the preceding year among Spanish elders, either men or women, according to two age groups: 65–74 and ≥ 75 years. Finally, we also analyzed the reasons for lack of sexual activity among those who had not practiced sex during the last 12 months according to the aged groups defined. The multivariate analyses were performed including the variables which were statistically significant in the bivariate analysis. Estimations were made using the STATA program version 11.2 (StataCorp LP©, College Station, TX, USA), and statistical significance was set at two-tailed $\alpha < 0.05$.

Results

The total number of subjects aged ≥ 65 years included was 1,939 (1,118 women, 821 men). Women (mean age: 74.5 ± 6.3) were significantly ($P < 0.05$) older than men (73.5 ± 6.2). Tables 1 and 2 show the distribution and prevalence of sexual activity in the previous 12 months according to sociodemographic features and health-rated variables. Overall, 62.3% of elderly men reported being sexually active, and only 37.4% women reported being sexually active ($P < 0.01$). The multivariate analysis revealed an increased risk of not

Table 1 Prevalence of sexual activity in the previous last 12 months among Spanish elderly men according to study variables

		Yes		No		Adjusted OR* (95%CI)
		N = 512	62.3%	N = 309	37.7%	
Age groups	65–69 years	204	39.9	56	17.9	1
	70–74 years	155	30.2	75	24.4	1.79 (1.20–2.68)
	75–79 years	92	18.0	82	26.6	3.28 (2.16–4.99)
	≥ 80 years	61	11.8	96	31.1	5.85 (3.78–9.05)
Sexual partner	Yes	463	90.5	192	62.2	1
	No	49	9.5	117	37.8	5.79 (3.98–8.42)
Educational level	Secondary studies completed or more	139	27.3	46	14.8	1
	Primary studies completed	118	23.2	101	32.8	1.95 (1.32–2.88)
	Primary not started or completed	252	49.5	162	52.4	2.61 (1.70–3.99)
Self-rated physical health	Very good/good	312	61.4	123	40.0	1
	Fair/poor/very poor	196	38.6	185	60.0	2.39 (1.79–3.19)
Self-rated sexual health	Very good/good	281	58.0	47	18.6	1
	Fair/poor/very poor	203	42.0	204	81.4	6.05 (4.20–8.71)
Number of chronic conditions [†]	None	155	30.2	65	21.1	1
	One	201	39.3	106	34.3	1.24 (0.86–1.80)
	Two or more	156	30.4	138	44.5	2.09 (1.45–3.02)
Number of medications [‡]	None	143	27.9	68	22.1	1
	One	178	34.7	86	27.9	1.01 (0.69–1.49)
	Two or more	191	37.4	155	50.0	1.69 (1.18–2.41)

Predictors of not being sexually active, results of the multivariate analysis.

*Reference category not being sexually active over last 12 months.

[†]Presence of self-reported diagnosed concomitant chronic diseases including diabetes, musculoskeletal, cardiovascular, or psychological disorders.

[‡]Taking medications for diabetes, heart disease, high blood pressure, and psychological disorders.

Table 2 Prevalence of sexual activity in the previous last 12 months among Spanish elderly women according to study variables

	Yes		No		Adjusted OR* (95% CI)
	N = 418	37.3%	N = 700	62.7%	
Age groups					
65–69 years	188	45.0	159	22.7	1
70–74 years	125	30.0	189	27.0	1.78 (1.25–2.54)
75–79 years	72	17.2	176	25.1	2.90 (1.95–4.31)
≥80 years	33	7.8	176	25.1	6.37 (3.90–10.42)
Sexual partner					
Yes	355	85.0	224	32.0	1
No	63	15.0	476	68.0	12.0 (8.41–17.18)
Educational level					
Secondary studies completed or more	56	13.5	85	12.2	1
Primary studies completed	111	26.7	215	31.0	1.05 (0.69–1.62)
Primary not started or completed	248	59.7	395	56.8	1.28 (0.80–2.05)
Self-rated physical health					
Very good/good	185	44.5	269	38.6	1
Fair/poor/very poor	231	55.5	426	61.3	1.27 (0.96–1.69)
Self-rated sexual health					
Very good/good	196	55.3	145	33.2	1
Fair/poor/very poor	158	44.7	291	66.8	2.49 (1.79–3.47)
Number of chronic conditions†					
None	86	20.6	93	13.2	1
One	140	33.4	219	31.3	1.46 (0.96–2.21)
Two or more	192	45.9	389	55.5	1.88 (1.28–2.78)
Number of medications‡					
None	77	18.4	96	13.8	1
One	121	29.1	173	24.8	1.14 (0.74–1.76)
Two or more	219	52.5	430	61.4	1.57 (1.06–2.31)

Predictors of not being sexually active, results of the multivariate analysis.

*Reference category not being sexually active over last 12 months.

†Presence of self-reported diagnosed concomitant chronic diseases including diabetes, musculoskeletal, cardiovascular, or psychological disorders.

‡Taking medications for diabetes, heart disease, high blood pressure, and psychological disorders.

being sexually active with age (odds ratio [OR] 5.8, 95% confidence interval [CI] 3.8–9.05 men; 6.37, 3.9–10.4 women) for the oldest group as compared to the youngest group.

Among older men who practice sex in the previous year, 90.5% had a partner. Furthermore, women were less likely to have a partner than men (51.8% vs. 79.8%; $P < 0.01$). In fact, not having a partner was a significant predictor of sex inactivity (OR 5.79, 95% CI 3.98–8.42 men; 12.0, 8.4–17.2 women). Men with a lower educational level also showed significantly ($P < 0.05$) lower sexual activity than those with higher educational level (OR 2.61, 1.70–3.99).

Men with worse self-rated physical health (OR 2.39, 95%CI 1.79–3.19), worse self-rated sexual health (OR 6.05, 4.2–8.71), suffering ≥ 2 chronic conditions (OR 2.09, 1.45–3.0), and taking ≥ 2 medications (OR 1.69, 1.18–2.41) had higher probability of reporting no sexual activity. Similarly, worse self-rated sexual health (OR 2.49, 95%CI 1.79–3.47), suffering ≥ 2 chronic conditions (OR 1.8, 1.28–2.78), and taking ≥ 2 medications (OR 1.57, 1.06–2.31) were also associated

with higher probability of reporting no sexual activity in women (Tables 1 and 2).

Table 3 summarizes the prevalence of sexual practices in the preceding year among Spanish elders by age groups (65–74 and ≥ 75 years). Among men and women sexually active, the frequency of sex was lower among those ≥ 75 years of age than among younger persons ($P < 0.05$). Nevertheless, even within the oldest age group, 55.2% of men and 33.3% of women reported having sex at least two times per month. The proportion of sexually active men in the youngest age group that reported engaging in oral sex was 11.3% as compared with 3.9% in the oldest group, which was similar in women (5.4% and 2.5%, respectively). The prevalence of masturbation was higher among men than women; and lower at older ages (Table 3).

Table 4 shows the reasons for lack of sexual activity among Spanish elderly men and women who had not practiced sex during the last 12 months by age. The most common reasons for sexual inactivity among younger men were that the partner was physically ill and lack of interest,

Table 3 Prevalence of selected sexual practices in the preceding year among Spanish elderly men and women according to age

	Men				Women			
	65–74 years		≥75 years		65–74 years		≥75 years	
	N	%	N	%	N	%	N	%
Frequency of sexual practices* in the preceding year ^{††}								
Two or more times a week	30	9.7	3	2.6	29	12.7	3	4.8
Two-four times a month	177	57.8	60	52.6	100	44.5	16	28.6
Once a month or less	99	32.57	51	44.7	96	42.8	37	66.7
Kissing and hugging ^{†‡§}								
No	63	17.68	33	21.4	82	26.2	48	46.2
Yes	296	82.32	120	78.6	231	73.7	56	53.8
Vaginal intercourse ^{†‡§}								
No	106	29.56	68	44.8	112	35.8	73	70.0
Yes	253	70.44	84	55.2	201	64.2	31	30.0
Oral sex [§]								
No	318	88.67	147	96.1	296	94.6	102	97.5
Yes	41	11.33	6	3.9	17	5.4	3	2.5
Masturbation [§]								
No	303	84.35	134	87.7	276	88.3	99	95.0
Yes	57	15.75	19	12.3	37	11.7	5	5.0

*Sexual practices include ever giving or receiving kissing and hugging, vaginal intercourse, oral sex, or masturbation.

[†]Significant differences ($P < 0.05$) between men and women for the 65–74 years age group.

^{††}Significant differences ($P < 0.05$) between men and women for the ≥75 years age group.

[§]Indicates ever giving or receiving in the preceding year.

whereas for the oldest group, that the man was a widower. This latest reason was the most common among women aged 65–74 years (44.8%) and ≥75 years (60.3%).

Discussion

This study provides data on sexual activity and behaviors from Spanish elderly people and associated factors. We found that sexual activity decreased with age which agrees with studies also reporting a decreased sexual activity with age [4,11,12] but disagree with others suggesting an increase of sexual activity with age [8,10,15,22,23]. Nevertheless, an interesting topic is that age does not predict sexual desire [2].

In our study, men were more sexually active than women, which is in agreement with previous

studies [6,12,15,19,21]. This may be related to the fact that men report being more interested in sex than women [11]. Laumann et al. [5] analyzed Spanish data from the Global Study of Sexual Attitudes and Behaviors and reported that importance of sex was also higher for men (64.1%) than for women (33.8%). It is possible that women's ethnic background or sociocultural factors may critically influence their interest and expectations on sexual activity [22]. In fact, social determinants and factors influencing sexual activity include social taboos, conjugal status, and knowledge on sexuality, self-esteem, and attitudes toward sexuality [2]. In such scenarios, men and women face stereotypes about their sexual function or whether it is appropriate for them to participate or be interested in sexual activity [26]. Furthermore, family, traditional institutions, or healthcare providers can

Table 4 Reasons for lack of sexual activity among Spanish elderly men and women who had not had sex during the previous 12 months according to age

	Men				Women			
	65–74 years		≥75 years		65–74 years		≥75 years	
	N	%	N	%	N	%	N	%
Lack of sexual interest	27	21.6	41	22.8	39	11.7	26	7.8
I am physically ill	21	16.8	31	17.2	12	3.5	12	3.5
Partner physically ill	29	23.2	17	9.4	48	14.4	21	6.2
Widower/widow	19	15.2	43	23.9	150	44.7	202	60.3
Didn't want to	4	3.2	6	3.3	18	5.4	23	7.0
Other	25	20.0	42	23.3	68	20.2	51	15.2

exhibit prejudices when approaching sexual activity in older populations, mostly in women [18].

Factors Associated with Sexual Activity in Older People

We found that sexual activity was related to having a sexual partner, higher education, and good self-rated physical and sexual health. Our results are similar to those previously found in the literature where sexual partner [1,6,8,11,14–17,22], education [15,26], self-rated physical health [2,7,8,11,12,27] and sexual health [7] have been found to influence the elderly sexual behaviors. Sexual activity was positively associated with having a sexual partner [11,28]. In fact, partnership drives sexual activity, particularly in later life [2,11] and in women [12,29] who are less likely to have sexual partners in older ages than male [19]. This difference may be explained by factors including the age structure of marital relationship among adults (men are usually married with younger women), differential remarriage patterns, and earlier death rate in men [11,12]. In the current study, marriage (or have partner) provides the social and emotional context for most of sexual activity, which agrees with previous studies [19].

We also showed that poor self-rated health affects sexual activity. Our results agree with previous studies reporting that men and women who rated their health as poor were less likely to be sexually active [7,11,12]. Schick et al. showed that men with poor health reported a higher frequency of masturbation than those with good self-rated health [14]. For women, poor health was related to a lower frequency of oral sex and vaginal intercourse [14]. Sexual behavior may be influenced by a woman's self-perceived health status such that women who experience better health may have more opportunities for having sex or an easier ability to engage in sexual behavior [8]. This pattern suggests that gender orientation can be important for gender differences in positive self-rated sexual health.

Finally, a higher number of comorbid conditions and use of medication were associated with greater impairment of sexual function [6,7,11,12,16,17,20,27]. It seems that diseases and their treatment have a negative impact on sexual activity and sexual response [6], as chronic medical illnesses tend to disrupt the desire and arousal phases of the sexual response [27]. In addition, medical conditions have been associated to sexual dysfunctions, particularly in older men

[12,20]. Finally, individuals with chronic illness may become disinterested in sex or may become sexually inactive because of misconceptions about their ability to have sex, the safety of having sexual relations, or because of body image concerns [27].

Sexual Practices

We found that the most common sex frequency was two to four times a month in both genders, but this frequency decreased in those aged >75 years. Herbenick et al. [8] reported similar results where older people have a sex frequency of few times/month, and those aged >70 have sex a few times/year. Nevertheless, Lindau et al. [12] found that among those sexually active, the frequency of sex was higher in those aged 75–85 years as compared to younger people. The American Social Life, Health and Ageing Project also showed that sex frequency was lower in the oldest age [11]. The decreasing proportion of sexual activity with age may reflect sexual health concerns, such as pain, or lower libido [9].

Our results showed that the most common sexual practices were kissing and hugging, followed by vaginal intercourse in agreement with the study by Waite et al. [19]. Oral sex is less practiced during partnered sex than either foreplay or vaginal intercourse [19]. In fact, sexual practices of elders mostly consist of kissing, hugging, and sexual touching [19]. Interestingly, a recent study including a multinational sample of older couples has found that kissing and cuddling was the strongest predictor of relationship happiness among older men [30]. We also found a decrease in frequency of vaginal intercourse with increasing age [9,13], which maybe related to an increased incidence of sexual dysfunction in older men induced by comorbid diseases, e.g., diabetes. We showed low prevalence of masturbation, with a higher prevalence in men, and a decrease in women aged >75 years [9,19]. Solo masturbation was associated with male gender, higher education, and lesser practice of religion [6]. Nevertheless, although solo masturbation may be an important outlet for unpartnered older adults, it may be less preferred than partnered sexual activities for most individuals [6]. It seems that being married or having a partner can influence the type of sexual practice. In fact, partnered women were more likely to report vaginal intercourse and mutual masturbation [8]. Further among subjects who are sexually active, the most common sexual activity was intercourse for men and masturbation for women [18]. Finally,

health status was related to sexual practices, e.g., vaginal intercourse which agrees with the concept that being sexually active can lead to positive health perception [8]. Nevertheless, a cause and effect relationship cannot be inferred, as people with positive perception of health can have more sex or people having more sex may feel more positively about their health.

Factor for No Sexual Relationships in Older People

In our study, the most common reason for lack of sexual activity was widowhood, except in 65–74-year-old men, where the reason was that the partner was physically ill. The main causes of no sexual activity were death of spouse (31%), loss of sexual desire (29%), and health considerations (17%). Current results are similar to previous studies where reasons for lack of sexual activity included: partner's physical health [2,11,12,15,22], lack of interest in sex [2,12,22], loss of desire [2,15,18], and having no partner [18,22]. A previous study conducted in Spain reported that lack of interest was the most common cause for no sexual relationships for female (36%) and the second cause for male (17%) [3]. In fact, a lack of sexual interest was more common in Spain than in other Southern and Northern European regions [23,24].

Widowhood and lack of partnership were predictors of low sexual activity [6]. Men were better able than women to keep up their sexual intercourse activity because of the low rate of widowed men in these age groups [2]. In addition, medical illness and the use of certain medications can lead to lower sexual desire [26,27].

Strengths and Limitations of the Study

Major strengths of the current study are that we used a large, national population-based sample of Spanish elderly and personal interviews. Current design agrees with prior studies using a 1-year time frame to define sexual activity and behaviors [6,11]. Nevertheless, some limitations should be noted. First, it has a cross-sectional design; therefore, it is not possible to examine causality effects and longitudinal changes in sexual activity and practices. Second, some variables could not be properly understood by older people. Third, self-report of sexual conditions and other health conditions are likely to underestimate the true prevalence because subjects may not be aware or may choose not to disclose that they have the condition in question. Fourth, the survey did not include data on safe sex practices or data about the

use of erectogenic medication. Since erectile dysfunction is one of the most prevalent reasons why sexual intercourse in older men decreases [7], it would be interesting to investigate these data. Similarly, female sexual dysfunction, e.g., orgasmic disorders, should be also included in new studies. More importantly, the definition of sexually active used in our study was slightly broad as it included kissing and hugging, which may be considered as intimate activity only. Nevertheless, the inclusion of these activities into sexual behaviors has been used in previous studies [7,11,12,19]. Finally, as this study included heterosexual people, current findings may be limited in relevance to lesbian, gay, and other people who are not identified as heterosexual, and also to non-Western cultures [11].

The current study provides data on sexual activity and behaviors from Spanish elderly people and associated factors constituting a valuable tool for examining habit changes and the effectiveness of campaigns to promote sexual activity among older populations. In addition, identification of subgroups of people who are at risk for sexual inactivity can be helpful for clinicians in order to orient the proper management of these individuals.

Conclusion

We found that almost 50% of the older population reported to be sexually active, but sexual activity decreased with age. Sexual activity was related to having a partner and better self-perceived health. The most common sexual practices were kissing and hugging and vaginal intercourse. Common reasons for sexual inactivity were lack of interest, widowhood, or physical illness. The current study identifies several important factors that appear to influence sexuality in older people with potential implications for healthcare providers for addressing these concerns in an effective manner. These data can be useful for designing and delivering health-related interventions and services focused on sexuality in older people.

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