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ORIGINAL ARTICLE

A population-based survey of sexual activity, sexual problems and associated help-seeking behavior patterns in mature adults in the United States of America

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To study sexual activity, the prevalence of sexual dysfunction and related help-seeking behaviors among mature adults in the United States of America, a telephone survey was conducted in 2001–2002. A total of 1491 individuals (742 men/749 women) aged 40–80 years completed the survey. Overall, 79.4% of men and 69.3% of women had engaged in sexual intercourse during the 12 months preceding the interview. Early ejaculation (26.2%) and erectile difficulties (22.5%) were the most common male sexual problems. A lack of sexual interest (33.2%) and lubrication difficulties (21.5%) were the most common female sexual problems. Less than 25% of men and women with a sexual problem had sought help for their sexual problem(s) from a health professional. Many men and women in the United States report continued sexual interest and activity into middle age and beyond. Although a number of sexual problems are highly prevalent, few people seek medical help.
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Introduction

The development of convenient and effective oral treatments for male erectile dysfunction has stimulated an increasing level of interest in the sexual functioning of middle-aged and older adults. Over the last decade, many studies have investigated the prevalence of sexual problems among middle-aged and elderly people. Most of these studies have involved the populations of industrially developed nations around the world, particularly in Europe,[1–3] and in the Americas.[4–12] The prevalence of the male sexual problems of erectile dysfunction and early ejaculation and their related risk factors have been investigated most extensively, whereas fewer studies have focused specifically on female sexual dysfunction.[13,14] Moreover, relatively little is known about the average frequency of sexual activity and the importance of sexual relationships among older men and women, although the few studies that have examined sexuality in mature adults have reported that sexual interest and activity persist well into older age.[15,16]

The published studies of the prevalence and correlates of sexual problems in developed and developing countries have used a variety of different study designs and definitions, which makes valid cross-national comparisons difficult. Moreover, there are currently no related studies reporting how men or women from different cultures attempt to manage or overcome their sexual problems, and there are only a few studies that allow a comparison of sexual behaviors across different countries.[17]

The Global Study of Sexual Attitudes and Behaviors (GSSAB) was a population survey of 27 500 men and women aged 40–80 years in 29 countries representing many world regions.[18–21] Here, we report the results from the respondents in the United States. In addition to estimating the prevalence of several sexual problems in men and women, we sought to investigate the factors associated with these problems and described the help-seeking behavior they elicited in this population.

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Methods

Using a random-digit dialed sampling design, computer-assisted telephone interviews were carried out in the United States during 2001 and 2002. Respondents were randomly selected by asking for the man or woman in the household aged between 40 and 80 years of age (participants were interviewed by interviewers of the same gender). Women and men were sampled in approximately equal numbers by design and verbal consent was obtained from all study participants. They were also informed about the following issues: (1) all information obtained would be used in aggregate; (2) responses were voluntary; (3) the confidentiality and the privacy of their responses were protected because no personal identifiers were coded into the interview instruments; (4) no list of respondents was retained; (5) the protocol was approved by an institutional review board; and (6) 'refusers' were not called back in an effort to convert them to participating respondents.

A structured questionnaire requested information concerning general health, demographics, relationships and sexual behaviors, attitudes and beliefs. The subjects were asked if they had engaged in sexual intercourse during the previous 12 months and the presence of sexual dysfunction was assessed by means of two sequential questions. The respondents were first asked whether they had experienced one or more of the sexual problems listed in Table 2 for a period of at least 2 months during the previous year, and those who answered 'Yes' were then asked whether they had experienced the problem 'occasionally', 'sometimes' or 'frequently'.

Logistic regression was used to investigate potential factors associated with a selected sexual dysfunction. In these analyses, the presence of a sexual dysfunction was coded only for those respondents who reported experiencing the problem frequently or periodically, whereas those who indicated that they experienced the problem only occasionally were recoded to indicate no sexual dysfunction.

The subjects who reported that they had experienced a sexual problem were asked whether they had sought help from a number of possible sources. The options included: 'Talked to partner', 'Talked to a medical doctor (other than a psychiatrist)', 'Looked for information anonymously (in books/magazines or on the internet)', 'Talked to family member or friend', 'Taken prescription drugs/devices or talked to pharmacist', 'Talked to psychiatrist or psychologist or marriage counsellor', 'Talked to a clergy person or religious adviser', 'Called a telephone help line', 'Other—please specify'. Respondents could indicate that they had sought help from more than one source.

The subjects with sexual problems who had not consulted a physician were asked why they had not done so, and offered a list of 14 possible reasons (from which they were to check all that applied). The reasons included attitudes and beliefs regarding the sexual problem and the patient–doctor relationship. All respondents (irrespective of whether they reported any sexual problems) were also asked. 'During a routine office visit or consultation in the past 3 years, has your physician asked you about possible sexual difficulties without you bringing it up first?' (Yes/No) and 'Do you think a doctor should routinely ask patients about their sexual function?' (Yes/No).

The categorization of household income as 'low', 'medium' or 'high' was based on the distribution of income in the United States.

The prevalence of a specific characteristic was calculated by dividing the number of cases by the corresponding population. The denominator for the calculation of the prevalence of a sexual problem was the number of sexually active people (that is, at least one episode of intercourse during the previous 12 months). The prevalence estimates are given with their confidence intervals.

Results

Characteristics of the study population

Overall, 19 377 individuals in the United States were contacted, 2817 of whom were not eligible to participate. Of the 16 560 eligible individuals, a total of 1491 individuals (742 men and 749 women) completed the survey, for a response rate of 9.0%. The high attrition rate is, in part, attributable to the protocol which stipulated that in the interest of preserving respondents' anonymity, no call backs were permitted to find better times for interviews or to try to persuade 'refusers' to participate.

Table 1 presents selected characteristics of the study sample. A large proportion of the subjects were married or involved in an ongoing partnership (64.8% of men and 62.0% of women). The majority of the men (61.0%) and women (68.5%) were employed and, overall, about 75% of men and women reported that they were in good or excellent general health.

Approximately 80% of men and 70% of women said that they had had sexual intercourse during the 12 months preceding the interview, whereas about one-third of men (35.4%) and more than one-quarter of women (27.8%) engaged in sexual intercourse regularly (that is, more than once a week).

Prevalence of sexual problems

Early ejaculation was the most common male sexual problem, and was reported by 26.2% of the sexually active men in the United States (approximately half of whom said that they experienced this problem periodically or frequently) (Table 2). Erectile diffi-

Table 1 Selected characteristics (%) of the study sample, USA, 2001–2002

	Men (n = *742*)	*Women* (n = *749*)
Age group (years)		
40–49	30.6	36.0
50–59	27.2	30.4
60–69	24.3	19.2
70–80	17.9	14.3
Relationship status		
Married or ongoing partnership	64.8	62.0
Divorced/separated without sex partner	17.6	17.7
Widowed without sex partner	6.5	12.8
Single without sex partner	11.1	7.4
Urban/suburban residential setting	67.0	64.1
Education		
Primary school or less	2.0	2.0
Secondary/high school	39.5	44.8
At least some college	58.5	53.2
Household income		
Low	10.9	19.1
Medium	57.5	55.2
High	31.6	25.7
Current employment status		
Employed	61.0	68.5
Unemployed	6.3	8.8
Retired	32.7	22.7
Religion		
Christian/Jew	89.4	93.7
Buddhist or other Asian	0.6	0.6
Atheist	6.7	2.2
Other, specified	2.2	2.2
Not specified	1.1	1.3
Good to excellent general health[a]	78.8	74.4
Intercourse in the last 12 months	79.4	69.3
Intercourse more than once a week	35.4	27.8
Number of sexual problems reported		
None	49.9	42.2
1	27.6	24.2
2	12.7	15.6
⩾3	9.8	18.0

[a]Self-reported 'good' or 'excellent' general health (vs 'fair' or 'poor').

culty was the second most common male sexual problem in the US sample, reported by 22.5% of sexually active men (12.4% said that they experienced this problem periodically or frequently), followed by a lack of sexual interest, which was reported by 18.1% of sexually active men (8.1% said that they experienced this problem periodically or frequently). The other sexual problems investigated (an inability to reach orgasm, a lack of sexual pleasure and pain during sexual intercourse) were experienced somewhat less frequently, particularly pain during intercourse, which was reported by only 3.1% of sexually active men in the United States.

Table 2 Prevalence of sexual problems in men and women in the USA by severity, 2001–2002

	% (95% confidence interval)
Men	
Early ejaculation	**26.2 (23.0, 29.5)**
Occasional	13.8 (11.4, 16.6)
Periodic	7.0 (5.2, 9.1)
Frequent	4.7 (3.3, 6.6)
Erectile difficulties	**22.5 (19.6, 25.7)**
Occasional	9.6 (7.6, 12.0)
Periodic	5.9 (4.3, 7.9)
Frequent	6.5 (4.8, 8.5)
Lack of sexual interest	**18.1 (15.4, 21.1)**
Occasional	8.8 (6.8, 11.1)
Periodic	4.8 (3.4, 6.6)
Frequent	3.3 (2.1, 4.9)
Inability to reach orgasm	**12.4 (10.1, 15.0)**
Occasional	5.8 (4.2, 7.8)
Periodic	2.5 (1.5, 4.0)
Frequent	3.1 (2.0, 4.7)
Sex not pleasurable	**11.2 (9.0, 13.8)**
Occasional	4.8 (3.3, 6.6)
Periodic	2.5 (1.5, 4.0)
Frequent	1.8 (1.0, 3.1)
Pain during sex	**3.1 (2.0, 4.7)**
Occasional	2.1 (1.2, 3.4)
Periodic	0.7 (0.2, 1.6)
Frequent	0.3 (0.0, 1.0)
Women	
Lack of sexual interest	**33.2 (29.8, 36.7)**
Occasional	14.7 (12.2, 17.5)
Periodic	6.0 (4.4, 8.0)
Frequent	10.2 (8.1, 12.7)
Lubrication difficulties	**21.5 (18.6, 24.7)**
Occasional	9.3 (7.3, 11.7)
Periodic	5.5 (3.9, 7.5)
Frequent	5.8 (4.2, 7.8)
Inability to reach orgasm	**20.7 (17.8, 23.9)**
Occasional	8.6 (6.6, 10.9)
Periodic	5.4 (3.8, 7.3)
Frequent	5.7 (4.1, 7.7)
Sex not pleasurable	**19.7 (16.8, 22.8)**
Occasional	8.8 (6.8, 11.1)
Periodic	5.5 (4.0, 7.5)
Frequent	4.2 (2.9, 6.0)
Pain during sex	**12.7 (10.4, 15.4)**
Occasional	6.6 (4.9, 8.7)
Periodic	2.9 (1.8, 4.4)
Frequent	2.8 (1.7, 4.2)

Based on reports from sexually active respondents. Percentage in the first row of each panel indicates the overall prevalence of the sexual dysfunction, defined as an experience of dysfunction for a period of 2 months or more. The difference between the overall prevalence and the sum of the three levels of severity of sexual dysfunction indicates the proportion that failed to specify the level of severity.

Lack of sexual interest (33.2%) was the most common sexual problem reported by sexually active women in the United States, followed by difficulty becoming adequately lubricated (21.5%), an inability to reach orgasm (20.7%) and a lack of sexual pleasure (19.7%) (Table 2). At least one-half of the women who reported each of these problems said that she experienced it frequently or periodically. The other sexual problem investigated was pain

Table 3 Factors associated with sexual problems by gender, USA, 2001–2002

	Men			*Women*		
	Early ejaculation	*Lack of sexual interest*	*Erectile difficulties*	*Inability to reach orgasm*	*Lack of sexual interest*	*Lubrication difficulties*
Age (years)						
40–49	Referent	Referent	Referent	Referent	Referent	Referent
50–59	0.58 (0.30, 1.14)	0.88 (0.42, 1.83)	0.88 (0.42, 1.85)	**2.45 (1.17, 5.11)***	1.59 (0.95, 2.67)	1.77 (0.92, 3.44)
60–80	0.79 (0.43, 1.44)	0.81 (0.39, 1.69)	**2.19 (1.17, 4.12)***	0.62 (0.30, 1.27)	1.38 (0.78, 2.44)	**2.56 (1.32, 4.98)**†
Level of physical activity						
Average and above	Referent	Referent	Referent	Referent	Referent	Referent
Lower than average	0.97 (0.48, 1.94)	**2.13 (1.08, 4.23)***	1.21 (0.64, 2.30)	1.84 (0.99, 3.39)	**1.76 (1.04, 2.98)***	1.28 (0.67, 2.44)
Smoking						
Never	Referent	Referent	Referent	Referent	Referent	Referent
Currently/ smoked before	1.13 (0.65, 1.95)	0.83 (0.44, 1.55)	1.05 (0.61, 1.80)	1.20 (0.70, 2.07)	1.29 (0.82, 2.01)	0.99 (0.59, 1.65)
Education						
Primary school or less	Referent	Referent	Referent	Referent	Referent	Referent
Secondary/some college	0.30 (0.84, 1.06)	1.12 (0.12, 10.44)	0.60 (0.15, 2.35)	0.43 (0.83, 2.25)	0.50 (0.12, 2.09)	0.66 (0.24, 1.79)
Household income						
Low	Referent	Referent	Referent	Referent	Referent	Referent
Medium and high	0.74 (0.35, 1.55)	0.64 (0.28, 1.45)	0.90 (0.44, 1.85)	0.63 (0.33, 1.21)	1.18 (0.65, 2.16)	**2.31 (1.07, 5.0)***
Medical conditions						
Depression diagnosed	1.49 (0.73, 3.04)	**3.19 (1.55, 6.59)**†	**2.61 (1.38, 4.96)**†	**2.73 (1.53, 4.85)**†	**2.08 (1.25, 3.48)**†	**2.42 (1.36, 4.33)**†
Hypertension diagnosed	0.97 (0.54, 1.76)	0.87 (0.43, 1.75)	0.96 (0.55, 1.67)	0.84 (0.45, 1.57)	0.48 (0.27, 1.83)	1.19 (0.68, 2.10)
Diabetes diagnosed	0.95 (0.43, 2.07)	1.18 (0.50, 2.78)	1.22 (0.62, 2.40)	0.58 (0.23, 1.46)	0.97 (0.50, 1.89)	0.81 (0.37, 1.79)
Heart disease	0.92 (0.43, 1.98)	0.91 (0.24, 1.54)	1.19 (0.63, 2.27)	0.71 (0.29, 1.78)	1.32 (0.66, 2.64)	1.01 (0.46, 2.23)
Prostate disease	0.86 (0.31, 2.34)	**2.56 (1.02, 6.44)***	1.61 (0.76, 3.42)			

Odds ratios from logistic regression (and 95% confidence intervals), in these analyses, the presence of a sexual problem included only those respondents who reported 'sometimes' or 'frequently' having the problem (that is, those who indicated 'occasionally' were recoded to indicate no sexual problem). Based on reports from sexually active subjects.
*$P \leqslant 0.05$; †$P \leqslant 0.01$.

during sexual intercourse, which was experienced by 12.7% of sexually active women.

Physical/health, demographic and socioeconomic factors associated with three selected sexual dysfunctions in men and women are summarized in Table 3 (odds ratios (OR) from logistic regression). Older age (age 60–80 years compared with the referent age of 40–49 years) was a significant correlate of erectile difficulties in men (OR 2.19, $P \leqslant 0.05$) and lubrication difficulties in women (OR 2.56, $P \leqslant 0.01$), whereas the age range of 50–59 years (the age at which many women experience the menopause) was associated with an inability to reach orgasm in women (OR 2.45 compared with the referent of 40–49 years, $P \leqslant 0.05$). A lower than average level of physical activity was a significant correlate of lack of sexual interest in both men (OR 2.13, $P \leqslant 0.05$) and women (OR 1.76, $P \leqslant 0.05$). The impact of a diagnosis of a number of common health conditions were investigated and it was observed that depression was significantly associated with a lack of sexual interest in both men (OR 3.19, $P \leqslant 0.01$) and women (OR 2.08, $P \leqslant 0.01$), erectile difficulties in men (OR 2.61, $P \leqslant 0.01$) and lubrication difficulties (OR 2.42, $P \leqslant 0.01$) and an inability to reach orgasm (OR 2.73, $P \leqslant 0.01$) in women. Among men, a diagnosis of prostate disease was associated with a lack of sexual interest (OR 2.56, $P \leqslant 0.05$).

Help-seeking behavior

The prevalence of selected help-seeking behaviors for sexual problems in the United States is summarized in Table 4. Of the respondents who were sexually active and reported experiencing at least

Table 4 Prevalence of selected help-seeking behaviors for sexual problems by gender, USA, 2001–2002

	% (95% confidence interval)
Men	
Talked to partner	43.3 (38.3, 48.3)
Talked to medical doctor	21.9 (18.0, 26.3)
Taken drugs/used devices or talked to pharmacist	17.7 (14.1, 21.8)
Looked for information anonymously (in books/magazines or by telephone help-line/internet)	15.3 (11.9, 19.2)
Talked to family member/friend	8.9 (6.3, 12.1)
Talked to psychiatrist, psychologist or marriage counselor	3.7 (2.1, 6.0)
Talked to a clergy person or religious adviser	2.5 (1.2, 4.5)
Sought no help from a health professional	*75.7 (71.3, 79.8)*
No action taken	*45.2 (40.3, 50.3)*
Women	
Talked to partner	43.4 (38.7, 48.1)
Talked to medical doctor	16.1 (12.8, 19.7)
Talked to family member/friend	15.6 (12.4, 19.2)
Looked for information anonymously (in books/magazines or by telephone help-line/internet)	15.0 (11.9, 18.6)
Taken drugs/used devices or talked to pharmacist	13.7 (10.7, 17.2)
Talked to psychiatrist, psychologist or marriage counselor	6.3 (4.3, 8.9)
Talked to a clergy person or religious adviser	2.6 (1.3, 4.5)
Sought no help from a health professional	*79.7 (75.7, 83.3)*
No action taken	*43.9 (39.3, 48.6)*

Note: based on reports from respondents complaining of at least one sexual problem.

one sexual problem, 45.2% of men and 43.9% of women did not take any action (that is, they had not sought any help or advice). A slightly greater proportion of men (21.9%) than women (16.1%) reported talking to a medical doctor about their sexual problem(s), but overall the majority of men (75.7%) and women (79.7%) had sought no help from a health professional. Patterns of help-seeking behaviors were generally similar for men and women in the United States and talking to their partner was the most usual action taken by both men and women (43.3 and 43.4%, respectively).

Factors associated with seeking medical help for sexual problems

Some factors that might be associated with seeking medical help for sexual problems were investigated using logistic regression and the findings for both men and women in the United States are summarized in Table 5. A significant effect of age was seen only in men at age 60–69 years (OR 5.2, $P \leqslant 0.01$), compared with the referent group aged 40–49 years. Certain sexual problems were associated with a greater likelihood of seeking medical help. Erectile difficulties in men (OR 5.29, $P \leqslant 0.001$) and lubrication difficulties in women (OR 2.09, $P \leqslant 0.05$) were significant correlates of seeking medical help for sexual problems. A number of sexual beliefs and attitudes were significant correlates of seeking medical help for sexual problems. In men, these were 'being very or somewhat dissatisfied with their own sexual functioning' (OR 2.94, $P \leqslant 0.01$), 'a belief that decreased sexual ability would significantly affect their own self-esteem' (OR 2.69, $P \leqslant 0.05$) and 'thinking that it is acceptable to use medical treatment for sexual problems' (OR 13.52, $P \leqslant 0.01$). In women, having been asked by a doctor about possible sexual difficulties during a routine visit in the past 3 years (OR 2.23, $P \leqslant 0.05$), and thinking that a doctor should routinely ask patients about sexual function (OR 3.55, $P \leqslant 0.05$) were significantly correlated with seeking medical help for sexual problems. Thinking that older people no longer want/have sex had quite a different effect for men and women. Although among women, this belief was associated with an increasing likelihood of seeking medical help for sexual problems (OR 3.14, $P \leqslant 0.01$), men with this belief were less likely to seek medical help (OR 0.36, $P \leqslant 0.05$).

Attitudes and beliefs about diagnosis and treatment of sexual problems

The most common reasons cited among respondents in the United States for not consulting a doctor about a sexual problem were thinking it was not very serious or waiting for the problem to go away (36.3% of men and 38.1% of women) and a belief that it is a normal part of aging or being comfortable as he/she is (25.4% of men and 28.2% of women) (Table 6). Lack of access to or affordability of medical care and embarrassment about discussing sexual problems with their medical doctor were cited as a reason by less than 5% of men and women, whereas a lack of belief that a sexual problem is a treatable medical condition was cited by about 15% of men and women. Few respondents in the United States had been asked by a doctor about possible sexual difficulties during a routine visit in the past 3 years (11.5% of men and 15.0% of women) but more than one-half of men (59.2%) and women (54.0%) thought that a doctor should routinely ask patients about their sexual function.

Discussion

In this study, we report population-level data from middle-aged and older men and women in the United States concerning sexual behavior, the prevalence of sexual problems and associated help-seeking behaviors. The large cross-national population sample and the use of a common method of data collection represent two major strengths of

Table 5 Factors associated with seeking medical help for sexual problems by gender, USA, 2001–2002

	Men	*Women*
Age (years)		
40–49	Reference	Reference
50–59	1.72 (0.63, 4.73)	1.50 (0.70, 3.20)
60–69	**5.20 (1.82, 14.81)**†	1.18 (0.47, 2.99)
70–80	1.58 (0.52, 4.81)	2.07 (0.64, 6.68)
Education		
Primary school or less	Reference	Reference
Secondary/high school	0.99 (0.08, 11.69)	2.51 (0.21, 30.37)
At least some college	1.20 (0.10, 14.31)	2.89 (0.22, 37.53)
High/medium household income (vs low)	1.05 (0.32, 3.42)	1.01 (0.42, 246)
Sexual problems		
Erectile difficulties	**5.29 (2.42, 11.57)**‡	
Early ejaculation	0.49 (0.23, 1.04)	
Lack of sexual interest	1.29 (0.63, 2.65)	1.13 (0.59, 2.17)
Inability to reach orgasm		1.20 (0.62, 2.32)
Lubrication difficulties		**2.09 (1.11, 3.94)***
General sexual attitudes		
Have been asked by a doctor about possible sexual difficulties in a routine visit in the past 3 years	1.35 (0.54, 3.35)	**2.23 (1.11, 4.48)***
Think a doctor should routinely ask patients about sexual function	0.93 (0.43, 2.00)	**3.55 (1.55, 8.13)***
Very/somewhat dissatisfied with sexual function	**2.94 (1.31, 6.60)**†	1.42 (0.58, 3.49)
Belief that decreased ability to perform sexually would significantly affect self-esteem	**2.69 (1.12, 6.49)***	1.65 (0.70, 3.87)
Belief that sex is an extremely/very important part of overall life	1.70 (0.47, 6.11)	0.39 (0.08, 1.95)
Think it is ok to use medical treatment for sexual problems	**13.52 (1.57, 116.15)**†	1.34 (0.47, 3.81)
Think that older people no longer want/have sex	**0.36 (0.14, 0.97)***	**3.14 (1.33, 7.44)**†
Belief in religion guiding sex	1.06 (0.54, 2.10)	0.89 (0.47, 1.66)

Odds ratios from logistic regression and 95% confidence intervals. Based on reports from respondents complaining of at least one sexual problem.
*$P \leqslant 0.05$; †$P \leqslant 0.01$; ‡$P \leqslant 0.001$.

the GSSAB. Face-to-face interviews were not used to avoid causing respondents undue embarrassment when talking about private and sensitive issues, and to minimize the likelihood of respondents feeling obliged to give 'socially desirable' answers.[22] Only a sexual problem that persisted with moderate to higher frequency was considered to be a 'dysfunction'. This method is essentially equivalent to using two sequential screening tests, and minimizes the risk of false-positive responses. It is likely, therefore, that the prevalence of sexual dysfunction may be under-reported in the GSSAB in comparison with studies that used more sensitive, but less specific methods.

The overall response rate in the United States (9.0%) was low, but similar to other countries in our study, namely, Austria, Canada, Germany, Spain, Italy, United Kingdom and Israel (<12%); and somewhat lower than the response rate in Australia, New Zealand, Sweden, France and Belgium (14–17%). In the data available, we did not find any of the characteristics to be correlated to participation in the survey. Although it is true that low completion rates can serve as a flag for the possibility of systematic biases in sample coverage, it by no means guarantees or necessitates it. The prevalence of self-reported health conditions such as hypertension, diabetes and smoking in the GSSAB (these data are not shown here) was comparable with published values.[23–25] This suggests that contacts refused to participate in the study due to a general unwillingness to undergo a telephone interview, regardless of the subject matter and is therefore unlikely to have introduced a bias in the estimates of the prevalence of sexual behaviors and problems. It also appears to indicate that the study population was broadly representative of the US population. This assumption is further supported by the observation that the prevalence of erectile dysfunction among men in the US cohort of the GSSAB is comparable to values reported in published studies that were conducted in the United States among men aged 50 years or older in rural Central New York State,[5] and among US health professionals.[6] The prevalence of other sexual problems in our survey is also comparable to those yielded by the analysis of data from the National Health and Social Life Survey, a probability sample study of sexual behavior in a demographically

Table 6 Attitudes, behaviors and beliefs about diagnosis of and treatment for sexual problems by gender, USA, 2001–2002

	% (95% confidence interval)
Men	
Reasons for not consulting a doctor about the experienced sexual problem[a]	
Did not think it was very serious/ waiting if problem goes away	36.3 (30.8, 42.0)
Normal with aging/I am comfortable the way I am	25.4 (20.6, 30.8)
Doctor cannot do much/do not think it is a medical problem	14.9 (11.1, 19.5)
Not comfortable talking to an MD/MD is a close friend/MD is the wrong gender	3.1 (1.4, 5.7)
Do not have a regular physician/ doctor is expensive	2.4 (1.0, 4.8)
Doctor uneasy to talk about sex	1.0 (0.2, 2.9)
Have been asked by a doctor about possible sexual difficulties in a routine visit in the past 3 years[b]	11.5 (8.0, 15.7)
Think a doctor should routinely ask patients about their sexual function[b]	59.2 (53.0, 65.1)
Women	
Reasons for not consulting a doctor about the experienced sexual problem[a]	
Did not think it was very serious/ waiting if problem goes away	38.1 (32.9, 43.5)
Normal with aging/I am comfortable the way I am	28.2 (23.4, 33.2)
Doctor cannot do much/do not think it is a medical problem	13.5 (10.0, 17.6)
Not comfortable talking to an MD/MD is a close friend/MD is the wrong gender	5.0 (2.9, 7.9)
Do not have a regular physician/ doctor is expensive	2.3 (1.0, 4.6)
Doctor uneasy to talk about sex	0.9 (0.2, 2.5)
Have been asked by a doctor about possible sexual difficulties in a routine visit in the past 3 years[b]	15.0 (11.4, 19.3)
Think a doctor should routinely ask patients about their sexual function[b]	54.0 (48.3, 59.6)

Abbreviations: MD, medical doctor.
[a]Based on reports from respondents complaining of at least one sexual problem who have not consulted a doctor.
[b]Based on all respondents.

representative cohort of US adults.[4] In this study, an inability to reach orgasm, a lack of sexual interest and sex not pleasurable was reported by 22, 29 and 11% of the women and by 9, 16 and 7% of the men, respectively.

Some well-known risk factors (for example, smoking, diabetes, and so on) did not seem to affect sexual function/problems in our survey. This may be due to the limited power of our study, and to possible misclassification of the diagnosis of medical conditions as we had to rely on self-report. Despite that, we found that depression was a significant correlate of a number of sexual problems in both men and women in the United States. Comorbidity between male erectile dysfunction and depression is known to be high but the nature of the relationship between the two conditions is unclear.[26,27] Although the distress of erectile dysfunction may contribute to the development of depression, it is also possible that depressive illness may lead to erectile difficulties. There have been data from a prospective study suggesting that the incidence of erectile dysfunction is increased among men with depression.[28] When considering the co-presence of depression and sexual dysfunction, the possible role of antidepressant treatments should not be overlooked. Sexual dysfunction is a common side effect of antidepressant therapy; however, the reported rates of dysfunction may vary between different agents.[29,30] The selective serotonin reuptake inhibitors appear to be associated with especially high rates of sexual dysfunction and whereas men taking selective serotonin reuptake inhibitors report higher rates of sexual side effects than women, the dysfunction experienced by women seems to be more severe.[29,31] Finally, just as cardiovascular problems are good markers for sexual problems (and vice versa), our data suggest that depression can be investigated in a similar way, that is, physicians who note that their patients are depressed may want to inquire about their sexual function and patients who are having problems with sex should be queried about their mood state.

Our findings indicate that feeling that the problem was not severe, or not being bothered by the problem may be deterring men and women in the United States from raising the subject of their sexual difficulties with their doctor. Furthermore, they show that doctors in the United States rarely ask patients about their sexual health during a routine consultation, even though this would be welcomed by the majority of men and women and would appear to encourage medical help-seeking for sexual problems, at least in women. If left untreated, sexual problems can greatly diminish a patient's quality of life and it is important that physicians—especially primary care physicians—incorporate questions about sexual functioning into their routine patient work-ups.[32] If handled sensitively, this should result not only in improved functioning for the patient but also an enhanced physician–patient relationship and greater professional satisfaction.

In conclusion, these findings indicate that middle-aged and elderly men and women in the United States continue to show sexual interest and activity, in spite of the high prevalence of several sexual dysfunctions. Few of the men and women who experience sexual difficulties seek medical help; this may be due in part to believing that the problem was not serious and/or not being bothered by the problem. Appropriate educational initiatives, aimed at both patients and healthcare professionals, may help to increase awareness and understanding

of sexual health issues and help them to identify and overcome potential barriers that their patients' might have in discussing and seeking help for sexual problems, thereby enabling more older adults to continue to enjoy a fulfilling sexual life.

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Conflict of interest

Edward O Laumann and Edson D Moreira Jr are consultants for Pfizer Inc. Dale B Glasseran is an employee and stockowner of Pfizer Inc. Raimundo C S Neves—none.

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