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A Population Survey of Sexual Activity, Sexual Dysfunction and Associated Help-seeking Behavior in Middle-aged and Older Adults in Germany

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Abstract: The Global Study of Sexual Attitudes and Behaviors was a survey of 27,500 men and women aged 40 to 80 years in 29 countries. Here we report the sexual activity, the prevalence of sexual problems and related help-seeking behaviour among subjects in Germany.

A telephone survey was conducted in 2001 and 2002, using a standardised questionnaire covering demographics, general health, relationships, and sexual behaviours, attitudes and beliefs. A total of 1,500 individuals in Germany (750 men and 750 women) completed the survey.

Eighty-six percent of men and 66% of women had engaged in sexual intercourse during the year preceding the interview. The most common male sexual problems were early ejaculation (15%), a lack of sexual interest, erectile dysfunction and non-pleasurable sex (each 8%). The most common female sexual problems were a lack of sexual interest (18%), non-pleasurable sex (14%) and lubrication difficulties (13%). Most sexual problems were less common among men and women in Germany than in other European regions. Increasing age was a significant predictor of a lack of sexual interest and erectile difficulties in men. Only 18% of men and 15% of women had talked to a doctor about their sexual problem(s).

In conclusion, many middle-aged and older German adults reported continued sexual interest and activity. Overall, sexual problems were less prevalent in Germany compared with other European regions. Of those who experienced sexual problems, however, few had sought medical help. This was often due to a lack of perception of a problem.

Key words: Epidemiology; impotence; prevalence; sex; sexual disorders

Introduction

The prevalence and management of the sexual problems of middle-aged and older individuals has received increased attention in recent years, due at least in part to the development of convenient and effective oral treatments for male erectile dysfunction (ED). Studies investigating the prevalence of sexual problems among middle-aged and elderly men and women have been conducted in a number of European countries [1-6]. These have mostly investigated the prevalence of the male sexual problems of ED and early ejaculation and their related risk factors; however, fewer studies have focused specifically on female sexual dysfunction [7, 8]. Moreover, little is known about the overall importance of sexual relationships and the frequency of sexual activity among mature men and women. The few studies that have examined sexuality in these age groups have reported that sexual interest and activity continue into old age [9-11].

The published studies of sexual problems in European populations have employed different designs and definitions, making valid cross-country comparisons difficult. Furthermore, there are no authoritative guidelines advising how men or women can manage or overcome their sexual problems, and there are no studies that allow a comparison of sexual behaviours across many different countries.

The Global Study of Sexual Attitudes and Behaviors (GSSAB) was a population survey of 27,500 men and women aged 40 to 80 years in 29 countries around the world [12-14]. Here we report the results from the respondents in Germany, and compare the sexual behaviours, and the prevalence of sexual dysfunction and help-seeking patterns in this country with those seen in other Northern and Southern European regions.

Material, Methods and Statistics

Using a random-digit dialling sampling design, computer-assisted telephone interviews (CATIs) were carried out in Germany and in other Northern (Austria, Belgium, Sweden, United Kingdom) and Southern (France, Italy, Spain) European countries during 2001 and 2002. The respondents were randomly selected by asking for the man or woman in the household 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.

The questionnaire requested information concerning demographics, general health, relationships, and sexual behaviours, beliefs and attitudes. The subjects were

Table 1a. Age-standardised prevalence of sexual problems in men in Germany and other European regions by severity, 2001-2002 (percentage and 95% confidence interval).

	Germany	Northern Europe	Southern Europe
Early ejaculation	**15.4 (12.9, 18.7)**	**23.2 (21.2, 25.6)**	**21.9 (19.8, 23.4)**
Occasional	6.6 (4.9, 9.0)	11.7 (10.3, 13.7)	8.2 (7.2, 9.6)
Periodic	5.9 (4.1, 7.9)	8.1 (6.7, 9.6)	10.3 (8.7, 11.3)
Frequent	2.9 (1.9, 4.8)	3.4 (2.5, 4.4)	3.2 (2.4, 3.9)
Lack of sexual interest	**8.1 (6.1, 10.5)**	**14.6 (12.4, 16.0)**	**13.2 (11.5, 14.4)**
Occasional	3.3 (2.0, 5.0)	6.6 (5.3, 7.8)	6.6 (5.6, 7.7)
Periodic	2.8 (1.8, 4.6)	5.1 (3.8, 6.0)	5.2 (4.1, 6.0)
Frequent	1.9 (1.0, 3.2)	2.9 (2.1, 3.8)	1.4 (0.9, 1.9)
Erectile difficulties	**7.9 (5.6, 9.9)**	**16.2 (13.6, 17.4)**	**13.3 (11.2, 14.1)**
Occasional	2.0 (1.1, 3.5)	6.5 (5.1, 7.6)	4.9 (3.9, 5.8)
Periodic	3.5 (1.9, 4.8)	6.7 (5.1, 7.6)	6.3 (5.0, 7.0)
Frequent	2.4 (1.3, 3.8)	3.0 (2.0, 3.8)	1.9 (1.3, 2.4)
Sex not pleasurable	**7.9 (5.9, 10.2)**	**7.9 (6.3, 9.1)**	**9.3 (7.9, 10.4)**
Occasional	3.7 (2.6, 5.7)	3.0 (2.1, 3.8)	4.1 (3.3, 5.0)
Periodic	1.4 (0.6, 2.7)	3.3 (2.4, 4.2)	3.7 (2.9, 4.5)
Frequent	2.7 (1.4, 4.0)	1.5 (0.9, 2.1)	1.4 (0.9, 1.9)
Inability to reach orgasm	**5.6 (4.0, 7.7)**	**10.7 (8.6, 11.7)**	**12.5 (10.6, 13.4)**
Occasional	3.0 (1.9, 4.8)	4.2 (3.1, 5.1)	5.3 (4.4, 6.3)
Periodic	1.6 (0.6, 2.7)	4.5 (3.3, 5.4)	5.4 (4.1, 6.0)
Frequent	1.0 (0.4, 2.2)	1.7 (1.1, 2.5)	1.7 (1.1, 2.2)
Pain during sex	**1.8 (0.8, 2.9)**	**3.5 (2.6, 4.5)**	**4.4 (3.6, 5.4)**
Occasional	1.1 (0.4, 2.0)	1.7 (1.1, 2.4)	2.0 (1.5, 2.7)
Periodic	0.6 (0.1, 1.4)	1.4 (0.9, 2.2)	1.8 (1.3, 2.4)
Frequent	0.1 (0.0, 0.9)	0.4 (0.1, 0.8)	0.5 (0.3, 0.9)

Note: based on reports from sexually active respondents. Percentage in the first row of each panel indicates the regional average of sexual dysfunction, defined as an experience of dysfunction for a period of 2 months or more. The difference between the regional average and the sum of the three levels of severity of sexual dysfunction indicates the proportion who failed to specify the level of severity. All prevalences are adjusted according to the age distribution of the total of sexually active men in Germany.
Northern Europe includes Austria (n=500), Belgium (n=500), Sweden (n=1500), and the United Kingdom (n=1500).
Southern Europe includes France (n=1500), Italy (n=1500), and Spain (n=1500).

asked if they had engaged in sexual intercourse during the previous year and the presence of sexual dysfunction was assessed by means of two sequential questions. The respondents were first asked whether they had ever experienced one or more of the sexual problems listed in Tables 1a and 1b for a period of 2 months or more during the previous year, and those who answered positively were then asked to specify if they experienced it 'occasionally', 'sometimes' or 'frequently'.

We used logistic regression to investigate potential factors associated with 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, while those who indicated that they experienced the problem only occasionally were recoded to indicate no sexual dysfunction.

The subjects who reported having a sexual problem were asked whether they had sought help or advice from a series of sources. The listed 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'. More than one source could be indicated.

The subjects with sexual problems who did not consult 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

Table 1b. Age-standardised prevalence of sexual problems in women in Germany and other European regions by severity, 2001-2002 (percentage and 95% confidence interval).

	Germany	Northern Europe	Southern Europe
Lack of sexual interest	**17.5 (14.3,21.2)**	**28.8 (25.3,31.0)**	**29.3 (27.2,31.5)**
Occasional	6.1 (4.2,8.6)	10.0 (8.4,11.8)	9.3 (8.0,10.8)
Periodic	7.3 (5.2,10.0)	12.6 (10.8,14.6)	13.0 (11.5,14.7)
Frequent	4.1 (2.6,6.2)	5.8 (4.6,7.3)	6.8 (5.7,8.1)
Sex not pleasurable	**14.0 (10.9,17.2)**	**17.7 (15.7,20.0)**	**21.8 (20.0,23.9)**
Occasional	6.1 (4.2,8.6)	8.0 (6.5,9.6)	7.5 (6.3,8.9)
Periodic	3.9 (2.3,6.0)	7.5 (6.1,9.1)	10.7 (9.3,12.3)
Frequent	3.9 (2.1,5.8)	2.1 (1.4,3.1)	3.4 (2.6,4.4)
Lubrication difficulties	**13.4 (10.5,16.8)**	**20.9 (18.6,23.4)**	**16.0 (14.3,17.8)**
Occasional	3.7 (2.2,5.8)	6.7 (5.3,8.3)	4.2 (3.3,5.3)
Periodic	4.9 (3.2,7.3)	7.9 (6.4,9.6)	7.1 (6.0,8.5)
Frequent	4.7 (3.0,7.0)	6.4 (5.0,7.9)	4.6 (3.7,5.7)
Inability to reach orgasm	**11.8 (8.9,14.8)**	**19.2 (17.0,21.5)**	**24.1 (22.1,26.2)**
Occasional	6.1 (4.2,8.6)	7.3 (5.9,8.9)	7.8 (6.5,9.1)
Periodic	3.5 (2.0,5.5)	8.1 (6.7,9.8)	10.8 (9.4,12.3)
Frequent	2.0 (1.0,3.7)	3.7 (2.7,4.9)	5.5 (4.5,6.7)
Pain during sex	**5.3 (3.5,7.6)**	**10.2 (8.6,12.1)**	**12.2 (10.7,13.8)**
Occasional	2.6 (1.4,4.5)	4.1 (3.1,5.4)	3.7 (2.9,4.7)
Periodic	1.4 (0.6,2.9)	3.9 (2.9,5.1)	5.4 (4.4,6.6)
Frequent	1.2 (0.4,2.6)	2.3 (1.5,3.2)	2.9 (2.2,3.8)

Note: based on reports from sexually active respondents. Percentage in the first row of each panel indicates the regional average of sexual dysfunction, defined as an experience of dysfunction for a period of 2 months or more. The difference between the regional average and the sum of the three levels of severity of sexual dysfunction indicates the proportion who failed to specify the level of severity. All prevalences are adjusted according to the age distribution of the total of sexually active women in Germany.
Northern Europe includes Austria (n=500), Belgium (n=500), Sweden (n=1500), and the United Kingdom (n=1500).
Southern Europe includes France (n=1500), Italy (n=1500), and Spain (n=1500).

you think a doctor should routinely ask patients about their sexual function?' (Yes/No).

The categorisation of household income as 'low', 'medium' or 'high' was based on the distribution of income in each country in order to make it possible to compare nations with different absolute mean incomes.

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 sexual problem was the number of sexually active people (i.e. at least one episode of intercourse during the previous year). The prevalence estimates were age-standardised using the age distribution of the German population (by gender when appropriate), and are given with their confidence intervals (CI) [15].

Results

Characteristics of Study Population

Overall, 13,713 individuals were contacted, 5,105 of whom were not eligible to participate. Of the 8,608 eligible individuals, 5,055 refused to participate at introduction, while 2,053 interrupted the interview. A total of 1,500 individuals (750 men and 750 women) completed the survey, for a response rate of 17.4%. Table 2 presents selected characteristics of the study sample standardised for the age distribution of the German population. Approximately two-thirds of the subjects were married or involved in an ongoing partnership (73.5% of men and 60.4% of women) (Table 2). Nearly one-half of the men (56.4%) and women (42.2%) were employed. Overall, about three-quarters of men (77.3%) and women (71.2%) said they were in good or excellent general health.

The majority of men (85.8%) and women (66.4%) reported that they had had sexual intercourse during the 12 months preceding the interview, while 38.0% of men and 27.9% of women said that they engaged in sexual intercourse regularly (i.e. more than once a week).

Prevalence of Sexual Problems

Early ejaculation was the most common male sexual problem, and was reported by 15.4% of the sexually active men in Germany (Table 1a). Lack of sexual interest (8.1%), erectile difficulties (7.9%) and lack of pleasure in sex (7.9%) were the next most common male sexual problems, followed by an inability to

Table 2. Selected characteristics of the study population, Germany, 2001-2002 (percentage; age-standardised prevalence).

	Men (n = 750)	**Women** (n = 750)
Age group (years)		
40-49	30.0	27.1
50-59	28.1	26.0
60-69	30.4	28.1
70-80	11.5	18.8
Relationship status		
Married or ongoing partnership	73.5	60.4
Divorced/separated without sex partner	10.0	13.1
Widowed without sex partner	5.9	20.9
Single without sex partner	10.7	5.6
Urban residential setting	44.3	43.7
Education		
Primary school or less		0.3
Secondary/high school	84.1	92.5
At least some college	15.9	7.2
Household income		
Low	12.8	30.2
Medium	53.6	49.9
High	33.7	19.9
Current employment status		
Employed	56.4	42.2
Retired	38.4	42.0
Unemployed	4.7	5.0
Homemaker	0.5	10.8
Religion		
Christian/Jew	73.7	77.7
Muslim	0.8	0.4
Buddhist or other Asian	0.7	0.1
Atheist	23.7	20.1
Not specified	1.1	1.6
Good to excellent general health[a]	77.3	71.2
Intercourse in the last 12 months	85.8	66.4
Intercourse more than once a week	38.0	27.9

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

reach orgasm (5.6%). Very few men reported experiencing pain during sexual intercourse (1.8%). Approximately one-half of the men who reported each of these problems said that he experienced it frequently or periodically. The prevalence of all male sexual problems, except a lack of pleasure in sex, was substantially lower in Germany than in other European regions (non-pleasurable sex was reported to a similar extent in Germany and the rest of Northern European and the prevalence was only slightly higher in Southern Europe).

Lack of sexual interest (17.6%) was the most common sexual problem reported by sexually active women in Germany (Table 1b), followed by a lack of pleasure in sex (14.0%), lubrication difficulties (13.4%) and an inability to reach orgasm (11.8%). Pain during sexual intercourse was reported by only 5.3% of German women. Approximately one-half to two-thirds of the women who reported each of these problems said that she experienced it frequently or periodically. The prevalence of all female sexual problems was lower in Germany than in other European regions.

Physical/medical, demographic and socio-economic factors associated with three selected sexual dysfunctions in men and women are shown in Table 3 (odds ratios [OR] from logistic regression). Increasing age was a significant correlate of erectile difficulties and a

Table 3. Factors associated with selected sexual dysfunctions in Germany by gender, 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	0.70(0.35, 1.42)	1.05(0.38, 2.89)	2.65(0.81, 8.66)	1.02(0.30, 3.52)	1.18(0.61, 2.30)	1.37(0.60, 3.11)
	60-69	0.76(0.39, 1.50)	**2.42(1.02, 5.76)**[a]	**4.64(1.52, 14.18)**[c]	2.49(0.85, 7.26)	1.36(0.71, 2.61)	1.14(0.50, 2.62)
Level of physical activity							
	Average and above	Referent	Referent	Referent	Referent	Referent	Referent
	Lower than average	1.06(0.60, 1.87)	1.48(0.78, 2.82)	1.44(0.73, 2.86)	2.34(0.99, 5.51)	1.24(0.75, 2.06)	0.90(0.47, 1.73)
Smoking							
	Never	Referent	Referent	Referent	Referent	Referent	Referent
	Currently/smoked before	0.86(0.48, 1.55)	**2.38(1.02, 5.56)**[a]	1.02(0.49, 2.12)	0.67(0.27, 1.64)	0.90(0.54, 1.51)	0.79(0.41, 1.50)
Education							
	Primary school or less	Referent	Referent	Referent	Referent	Referent	Referent
	Secondary/some college	0.98(0.46, 2.07)	0.40(0.12, 1.33)	1.05(0.42, 2.64)	2.57(0.80, 8.27)	0.76(0.26, 2.22)	1.71(0.62, 4.73)
Household income							
	Low	Referent	Referent	Referent	Referent	Referent	Referent
	Medium/high	1.36(0.55, 3.36)	0.87(0.39, 1.96)	1.11(0.43, 2.87)	**3.99(1.12, 14.25)**[a]	1.22(0.69, 2.13)	1.27(0.63, 2.58)
Medical Conditions							
Depression diagnosed		0.71(0.16,3.12)	1.73(0.54, 5.50)	1.63(0.44, 6.07)	0.49(0.06, 3.87)	**2.37(1.21, 4.63)**[b]	1.74(0.72, 4.19)
Hypertension diagnosed		0.95(0.50, 1.81)	1.44(0.73, 2.85)	**2.48(1.25, 4.92)**[b]	0.29(0.08, 1.06)	0.86(0.47, 1.55)	1.26(0.63, 2.55)
Diabetes diagnosed		2.00(0.86,4.64)	1.44(0.58, 3.54)	1.23(0.47, 3.24)	0.63(0.08, 5.26)	0.52(0.15, 1.80)	1.84(0.64, 5.33)
Heart disease		1.30(0.55, 3.11)	0.83(0.34, 2.04)	0.57(0.21, 1.53)	1.33(0.27, 6.57)	0.94(0.38, 2.30)	0.96(0.33, 2.79)
Prostate disease		0.60(0.20, 1.80)	1.75(0.76, 4.03)	1.67(0.72, 3.88)			

Note: odds ratios and 95% confidence intervals from logistic regression, in these analyses, the presence of a sexual dysfunction included only those respondents who reported 'sometimes' or 'frequently' having the problem (i.e. those who indicated 'occasionally' were recoded to indicate no sexual problem). Based on reports from sexually active subjects.

[a]$p \leq 0.05$; [b]$p \leq 0.01$; [c]$p \leq 0.001$

Table 4. Prevalence of selected help-seeking behaviours for sexual problems in Germany and other European regions by gender, 2001-2002 (percentage and 95% confidence interval).

	Germany	Northern Europe	Southern Europe
Men			
Talked to partner	58.1 (51.4,64.5)	34.9 (32.1,38.8)	47.9 (44.4,50.9)
Looked for information anonymously (in books/magazines or via telephone help-line/Internet)	17.9 (13.4,23.8)	10.1 (7.9,12.2)	14.1 (11.4,16.0)
Talked to Medical Doctor	17.6 (13.0,23.3)	18.3 (16.3,21.8)	21.1 (19.1,24.6)
Talked to family member/friend	12.2 (7.5,16.1)	5.0 (3.5,6.5)	11.4 (9.1,13.3)
Taken drugs/used devices or talked to pharmacist	9.4 (5.4,13.1)	9.6 (8.4,12.7)	10.2 (8.4,12.4)
Talked to psychiatrist, psychologist or marriage counsellor	5.0 (2.1,7.8)	3.0 (1.8,4.2)	5.0 (3.5,6.4)
Talked to a clergy person or religious adviser	0.6 (0.0,2.4)	0.5 (0.1,1.3)	1.3 (0.6,2.1)
Sought no help from a health professional	80.0 (74.3,85.0)	80.7 (77.3,82.9)	76.7 (73.1,78.8)
No action taken	31.8 (26.1,38.5)	52.1 (48.2,55.2)	39.3 (36.2,42.6)
Women			
Talked to partner	47.1 (41.4,54.7)	37.4 (34.2,40.7)	49.7 (46.6,52.8)
Looked for information anonymously (in books/magazines or via telephone help-line/internet)	21.3 (16.4,27.5)	12.1 (10.0,14.4)	13.3 (11.3,15.5)
Talked to family member/friend	16.1 (11.7,21.8)	10.5 (8.5,12.7)	15.6 (13.5,18.00)
Talked to Medical Doctor	15.2 (11.0,20.8)	20.4 (17.8,23.2)	25.6 (23.0,28.4)
Taken drugs/used devices or talked to pharmacist	9.3 (6.5,14.8)	15.1 (12.8,17.6)	14.9 (12.8,17.2)
Talked to psychiatrist, psychologist or marriage counsellor	3.5 (1.5,6.8)	2.3 (1.4,3.5)	4.1 (3.0,5.5)
Talked to a clergy person or religious adviser	1.9 (0.5,4.5)	0.8 (0.3,1.6)	2.5 (1.6,3.6)
Sought no help from a health professional	83.0 (77.3,87.5)	76.8 (73.9,79.5)	72.7 (69.9,75.4)
No action taken	38.8 (31.1,44.1)	46.4 (43.1,49.7)	36.0 (33.1,39.0)

Note: based on reports from respondents complaining of at least one sexual problem. All prevalences are adjusted according to the age distribution of the total of sexually active men and women in Germany.
Northern Europe includes Austria, Belgium, Sweden, and the United Kingdom.
Southern Europe includes France, Italy, and Spain.

lack of sexual interest in men at 60 to 69 years, compared with the referent of 40 to 49 years (OR 4.64 and 2.42, respectively) while in women age had no significant effect on any of the three dysfunctions. Being a smoker, either currently or in the past was a significant correlate of lack of sexual interest in men (OR 2.38, $p \leq 0.05$) but not in women. Interestingly, among women having a medium or high household income significantly increased the risk of experiencing an inability to reach orgasm compared with those respondents with a low income (OR 3.99, $p \leq 0.05$). Of the medical conditions considered, only two proved to be significantly associated with a sexual dysfunction: among men, hypertension was a significant correlate of erectile difficulties (OR 2.48, $p \leq 0.01$) and among women, a diagnosis of depression was a significant correlate of a lack of sexual interest (OR 2.37, $p \leq 0.01$).

Help-seeking Behaviour

The prevalence of selected help-seeking behaviours for sexual problems among men and women in Germany are summarised in Table 4 (values for respondents from other European regions are also included for the purpose of comparison). Of the German respondents who were sexually active and reported at least one sexual problem, 31.8% of men and 38.8% of women did not take any action (i.e. they did not seek any help or advice). Less than 20% of men (17.6%) and women (15.2%) reported talking to a medical doctor about their sexual problem(s) - these values were slightly lower than in the rest of Europe. The vast majority of men (80.0%) and women (83.0%) had sought no help from a health professional. In Germany, as in the rest of Europe, patterns of help-seeking behaviours were similar for men and women and talking to their partner was by far the most common action taken by both men and women (58.1% and 47.1%, respectively).

Some of the factors that might be associated with seeking medical help for sexual problems among men and women in Germany were studied using logistic regression and the findings are summarised in Table 5 (expressed as odds ratios, OR). Statistically significant

Table 5. Factors associated with seeking medical help for sexual problems by gender, Germany, 2001-2002.

	Men	Women
Age (years)		
40-49	Reference	Reference
50-59	0.56(0.16,1.95)	1.80(0.55,5.88)
60-69	0.50(0.14,1.79)	1.05(0.29,3.84)
70-80	0.46(0.09,2.46)	1.56(0.23,10.57)
Education		
Primary school or less	Reference	Reference
Secondary/high school	0.89(0.24,3.23)	0.94(0.00,4.23)
At least some college	1.15(0.23,9.87)	0.75(0.00,1.87)
High/medium household income (vs low)	1.03(0.25,4.22)	0.93(0.33,2.60)
Sexual problems		
Erectile difficulties	**13.0(4.58,36.95)**[b]	
Early ejaculation	0.44(0.17,1.16)	
Lack of sexual interest	0.58(0.21,1.57)	0.95(0.36,2.54)
Inability to reach orgasm		0.93(0.34,2.52)
Lubrication difficulties		**4.40(1.69,11.45)**[a]
General sexual attitudes		
Have been asked by a doctor about possible sexual difficulties in a routine visit in the past 3 years	2.85(0.75,10.87)	2.79(0.94,8.24)
Think a doctor should routinely ask patients about sexual function	2.26(0.84,6.12)	2.73(0.96,7.78)
Very/somewhat dissatisfied with sexual function	1.80(0.52,6.28)	1.31(0.20,8.52)
Belief that decreased ability to perform sexually would significantly affect self-esteem	1.38(0.50,3.80)	1.19(0.36,3.87)
Belief that sex is a extremely/very important part of overall life	1.32(0.35,4.97)	0.82(0.07,9.28)
Think it is OK to use medical treatment for sexual problems	0.69(0.27,1.75)	0.67(0.26,1.69)
Think that older people no longer want/have sex	0.43(0.13,1.44)	0.84(0.32,2.25)
Belief in religion guiding sex	0.51(0.15,1.76)	1.64(0.53,5.07)

Note: odds ratios and 95% confidence intervals from logistic regression. Based on reports from respondents complaining of at least one sexual problem.
[a]$p \leq 0.01$; [b]$p \leq 0.001$

effects were seen only for two specific sexual problems. Erectile difficulties in men (OR 13.0, $p \leq 0.001$) and lubrication difficulties in women (OR 4.40, $p \leq 0.01$) were significant correlates of seeking medical help for sexual problems. Age, socio-economic factors and general sexual attitudes did not significantly influence help-seeking behaviour.

Attitudes and Beliefs about Diagnosis and Treatment of Sexual Problems

The most common reasons cited among the respondents in Germany for not consulting a doctor about sexual problems were a belief that it is a normal part of aging or being comfortable as he/she is (72.6% of men and 70.8% of women) and thinking it is not very serious or waiting for the problem to go away (64.0% of men and 65.7% of women) (Table 6). These values were very similar to those seen in the rest of Northern European and slightly higher than in Southern Europe. Interestingly, a lack of perception of a sexual problem as a treatable medical condition was considerably more common among men and women in Germany than in the rest of Europe. Lack of access to or affordability of medical care were cited by less than 25% of men and women in Germany as reasons for not consulting a doctor, while 36.0% of men and 31.6% of women cited factors related to their relationship with their doctor as reasons for non-consulting and 12.7% of men and 13.7% of women said that they felt that their doctor was uneasy talking about sex. In Germany, very few men (9.2%) and women (12.7%) had been asked by a doctor about possible sexual difficulties during a routine visit in the past 3 years, however, approximately one-half of all respondents (54.2%% of men and 44.7% of women) thought that a doctor should routinely ask patients about their sexual function. This attitude was more prevalent in Germany than in other parts of Europe.

Table 6. Attitudes, behaviours and beliefs about diagnosis of and treatment for sexual problems in Germany and other European regions by gender, 2001-2002 (percentage and 95% confidence interval).

	Germany	Northern Europe	Southern Europe
Men			
Reasons for not consulting a doctor about the experienced sexual problem[a]			
Normal with aging/I am comfortable the way I am	72.6(66.8, 79.8)	72.9(70.1, 76.9)	62.3(59.3, 66.5)
Did not think it was very serious/Waiting to see if problem goes away	64.0(57.0, 71.0)	71.1(66.9, 74.0)	51.8(47.7, 55.2)
Doctor cannot do much/Do not think it is a medical problem	57.6(49.5, 64.0)	35.0(32.2, 39.7)	36.2(32.9, 40.1)
Do not have a regular physician/Doctor is expensive	23.9(18.3, 30.9)	21.8(18.9, 25.4)	27.9(24.1, 30.8)
Not comfortable talking to a MD/MD is a close friend/MD is the wrong gender	36.0(28.5, 42.5)	21.4(18.8, 25.3)	39.5(36.0, 43.3)
Doctor uneasy to talk about sex	12.7(8.3, 18.2)	8.0(6.1, 10.4)	6.6(5.1, 9.0)
Have been asked by a doctor about possible sexual difficulties in a routine visit in the past three years[b]	9.2(7.2, 11.5)	6.2(5.1, 7.3)	7.3(6.3, 8.4)
Think a doctor should routinely ask patients about their sexual function[b]	54.2(50.6, 57.9)	40.8(38.4, 42.8)	48.8(46.5, 50.4)
Women			
Reasons for not consulting a doctor about the experienced sexual problem[a]			
Normal with aging/I am comfortable the way I am	70.8(63.3, 76.7)	67.6(64.0, 71.0)	66.0(62.6, 69.4)
Did not think it was very serious/Waiting if problem goes away	65.7(58.4, 72.3)	62.5(59.4, 66.6)	53.2(50.0, 57.2)
Doctor cannot do much/Do not think it is a medical problem	60.7(53.7, 67.9)	35.1(31.7, 38.9)	34.4(31.7, 38.6)
Do not have a regular physician/Doctor is expensive	19.5(13.9, 25.6)	22.3(19.4, 25.6)	29.6(27.0, 33.6)
Not comfortable talking to a MD/MD is a close friend/MD is the wrong gender	31.6(25.3, 38.9)	23.3(20.0, 26.4)	44.5(40.0, 47.1)
Doctor uneasy to talk about sex	13.7(9.0, 19.2)	5.7(4.1, 7.6)	9.2(6.9, 11.0)
Have been asked by a doctor about possible sexual difficulties in a routine visit in the past three years[b]	12.7(10.5, 15.4)	6.7(5.7, 7.9)	6.0(5.3, 7.2)
Think a doctor should routinely ask patients about their sexual function[b]	44.7(41.1, 48.3)	32.6(30.7, 34.9)	39.3(37.8, 41.7)

[a]Based on reports from respondents complaining of at least one sexual problem who have not consulted a doctor.
[b]Based on all respondents. All prevalences are adjusted according to the age distribution of the total of sexually active men and women in Germany.
Northern Europe includes Austria, Belgium, Sweden, and the United Kingdom.
Southern Europe includes France, Italy, and Spain.

Discussion

We believe that this is the first study to report population-level data on sexual behaviour, the prevalence of sexual dysfunction and associated help-seeking behaviours in middle-aged and older men and women in Germany, in a manner that allows direct, valid comparisons with other European regions.

Major strengths of the GSSAB survey include its large cross-national population sample and the use of a common method of data collection (a standardised, structured questionnaire). In Germany and other European countries, computer-assisted telephone interviews (CATI) were used. A study conducted among residents of Bavaria by Meyer and colleagues assessed the validity and representativeness of data on health and health-related behaviour acquired by CATI by comparing it with the results of the German National Health Examination Survey of 1998 [16]. The authors concluded that the quality of data acquired using CATI compared well with that obtained using traditional methods such as face-to-face interviews or mailed questionnaires and recommended CATI as a basic methodology for future collection of German health data. Face-to-face interviews were not used in GSSAB because they may cause embarrassment when people are asked to provide information about private and sensitive issues or they may induce respondents to

give 'socially desirable' answers [17]. Only sexual problems that were experienced with moderate to higher frequency were considered to be 'dysfunctions' [18]. This method equates to using two sequential screening tests, and thus reduces the likelihood of false positive responses; it is therefore likely that the prevalence of sexual dysfunction is under-reported in GSSAB in comparison with studies that used more sensitive (and less specific) methods.

The overall response rate in Germany (17%) was modest, but the prevalence of a number of self-reported health conditions, including hypertension, diabetes and smoking in GSSAB (data not shown here) was generally consistent with published age- and gender-specific figures [19-22]. This suggests that the relatively low response rate did not lead to the introduction of bias in the estimates of the prevalence of sexual behaviours and dysfunctions but rather that refusal to participate in the study was simply the result of an unwillingness to undergo a telephone interview.

Although the negative effects of sexual problems on overall quality of life in older adults are well recognised [23]. few national studies of sexual dysfunction have been conducted in Germany to date and none of these have looked at the prevalence of sexual problems in both men and women. The Cologne Male Survey investigated the epidemiology of lower urinary tract symptoms, sexuality and ED specifically in a representative sample of men aged 30 to 80 years in the Cologne urban district [1, 24]. The results indicated that the men continued to be sexually active well into old age and that ED was highly prevalent (19.2%) - findings in common with the GSSAB sample in Germany. A recently published study of sexual problems among 998 young women (aged between 19 and 43 years) in Germany identified a wide variety of sexual problems and concluded that, overall, 21% of the evaluated women were unsatisfied with their sexual life. Even though the age range of the subjects in this study was much younger than in GSSAB, they reported a high prevalence of sexual problems [25]. Another study has focused on sexual problems in psychiatric in-patients, a sub-group of individuals who may be at higher-than-average risk of experiencing such disorders [26]. Interestingly, this study showed that although the patients reported persistent sexual problems, the majority had not sought specific therapeutic help - a finding in common with the GSSAB sample. The results indicated that patients with dysfunctions such as ED expressed more interest in discussing their problem than those with disorders such as loss of libido. In the GSSAB sample also, erectile difficulty was the only male sexual dysfunction that was associated with a significantly greater likelihood of seeking medical help.

The results of the GSSAB indicate that a lack of perception of sexual problems as potentially treatable medical conditions may be deterring German men and women from raising the subject of their sexual problems with their doctor. Furthermore, they show that doctors in Germany - in common with those in other European countries - rarely make enquiries about their patients' sexual health during routine consultation, even though this would be welcomed by about 50% of men and women. The frequency of self-reported sexual problems among male patients in German primary care practices was studied by Aschka and colleagues, using a cross-sectional survey based on structured questionnaires that were answered by patients and physicians [27]. The results showed that - as in the GSSAB sample - low sexual desire/interest and premature ejaculation were the most common sexual problems. Other findings of this survey that support those of GSSAB were that most physicians initiated a discussion about sexual concerns only seldom or occasionally, while 48% of the male patients considered that it was important to be able to talk to their doctor about sexual concerns.

In conclusion, our results show that, in Germany, as in other European regions, middle-aged and elderly men and women continue to show sexual interest and activity, despite the presence of a number of sexual problems. Only a minority of the men and women who experience sexual difficulties seek medical help, due at least in part to a lack of perception of these disorders as treatable medical conditions. This, together with the hesitancy of most family physicians to initiate discussions with their patients means that the management of sexual disorders is a neglected area of primary health care in Germany. Many patients would welcome the opportunity to talk to their physician about sexual concerns and physicians should be encouraged to provide openings for such discussions in routine consultations.

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