

# Sexual difficulties and help-seeking among mature adults in Australia: results from the Global Study of Sexual Attitudes and Behaviours

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**Abstract.** *Background:* The Global Study of Sexual Attitudes and Behaviours was a survey of 27 500 men and women in 29 countries. Here we report the sexual activity, the prevalence of sexual difficulties and related help-seeking behaviour among participants in Australia. *Methods:* A telephone survey was conducted in Australia in 2001–2002, with interviews based on a standardised questionnaire. A total of 1500 individuals (750 men and 750 women) aged 40 to 80 years completed the survey. The questionnaire covered demographic information, overall health, and sexual behaviours, attitudes and beliefs. *Results:* Overall, 83% of men and 74% of women had engaged in sexual intercourse during the 12 months preceding the interview, and 38% of all men and 29% of all women engaged in sexual intercourse more than once a week. Early ejaculation (23%), erectile difficulties (21%) and a lack of sexual interest (18%) were the most common male sexual difficulties. The most frequently reported female sexual difficulties were: lack of sexual interest (33%), lubrication difficulties (26%) and an inability to reach orgasm (25%). Older age was a significant predictor of male erectile difficulties and of lubrication difficulties in women. Only a minority of men and women had sought help for their sexual difficulty(ies) from a health professional. *Conclusions:* Many middle-aged and older adults in Australia report continued sexual interest and sexual activity. Several sexual difficulties are highly prevalent in this population, but those experiencing these difficulties rarely seek medical help. This may be because they do not perceive such difficulties as serious or sufficiently upsetting.

**Additional keywords:** epidemiology, health surveys, impotence, prevalence, sex, sexual disorders.

## Introduction

During the past 10 years, many studies have investigated the prevalence of sexual disorders among middle-aged and older individuals. These studies have mainly focussed on the populations of individual developed nations, particularly in Europe<sup>1–3</sup> and the USA.<sup>4–6</sup> Male erectile dysfunction (ED) and early ejaculation along with their related risk factors have been investigated most extensively, whereas there have been fewer studies that have focussed specifically on female sexual disorders.<sup>7,8</sup>

In Australia, several recent studies have reported the prevalence and correlates of sexual problems,<sup>9–13</sup> but there is relatively little published information about the 'usual' frequency of sexual activity and the value placed on sexual relationships among older men and women. The few

studies that have examined sexuality in mature adults in other developed countries have reported that sexual interest and activity persist well into older age.<sup>14–16</sup> There are also currently no studies reporting how men or women in Australia attempt to manage or overcome their sexual problems.

The Global Study of Sexual Attitudes and Behaviours (GSSAB) was a population survey of 27 500 men and women aged between 40 and 80 years in 29 countries representing many world regions.<sup>17</sup> The GSSAB focussed on the problems of sex in later life, this choice was made to allow for some comparisons of our findings with previous surveys done in this same age range. Here we present data on sexual activity, sexual difficulties and related help-seeking behaviours among mature men and women in Australia.

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## Methods

The GSSAB was the first large, multi-country survey to systematically study attitudes, beliefs and health in sexual relationships in middle-aged and older adults. The questionnaire used asked for information about demographics; health; relationships and general satisfaction; and individual behaviour, practices, attitudes and beliefs regarding sexuality. The data were collected using the most effective (i.e. less costly and time-consuming) survey method in each country. A random-digit-dialling sampling design was used in Europe, Israel, North America, Brazil, Australia and New Zealand. In the Middle East and South Africa, a door-to-door protocol was used, whereas in Asian countries other than Japan, an intercept method was employed.

Computer-assisted telephone interviews (CATIs) were carried out (using exclusively a random-digit dialled sampling design) in Australia during 2001 and 2002, with the respondents being randomly selected within households by asking for the man or woman aged between 40 and 80 years of age who had had the most recent birthday (participants were interviewed by interviewers of the same gender). Women and men were sampled in 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 a 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 behaviours, attitudes and beliefs. The participants were asked if they had engaged in sexual intercourse (defined as any intimate behaviour including: penile-vaginal/anal intercourse, oral contact with genitals/breasts/nipples, or touching yours/other's genitals) during the previous 12 months and the presence of sexual difficulties was assessed by means of two sequential questions.<sup>5,18</sup> The respondents were first asked whether they had experienced one or more of the sexual difficulties listed in Appendix 1 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 difficulty 'occasionally', 'sometimes' or 'frequently'.

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

The participants who reported that they had experienced a sexual difficulty were asked whether they had sought help from several possible sources. Respondents could indicate that they had sought help from more than one source.

The individuals with sexual difficulties 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 indicate all that applied). The reasons included attitudes and beliefs regarding the sexual difficulty and the patient-doctor relationship. All respondents (irrespective of whether they reported any sexual difficulties) 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 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 difficulty was the number of sexually active people (i.e. at least one episode of intercourse during the previous 12 months). The prevalence of selected demographic characteristics and the estimates of sexual difficulties were age-standardised using the age distribution of the year 2000 population of Australia by gender, and are given with their confidence intervals (CI).<sup>19</sup> The prevalences of help-seeking behaviours and attitudes about diagnosis of and treatment for sexual difficulties were age-adjusted according to the number of sexually active men and women in the sample.

## Results

### *Characteristics of study population*

Overall, 14 986 individuals were contacted, and out of 8875 eligible participants, 1500 individuals (750 men and 750 women) completed the survey, for a response rate of 16.9%. Table 1 presents selected characteristics of the study sample. The majority of the male (66.4%) and female (65.9%) respondents were married or involved in an ongoing partnership (Table 1). Employment rates among men and women were 65.3% and 55.7%, respectively, and 80% of men (80.3%) and women (80.4%) reported that they were in good or excellent general health.

The percentage of individuals who were sexually active significantly decreased with age in both gender ( $P < 0.001$ ). Although there was a progressive decrease in sexual activity with age, a larger drop was observed in both men and women in the 70 to 80 years of age. Although 83.2% of men and 73.5% of women out of all the participants in the study said that they had had sexual intercourse during the 12 months preceding the interview, only ~38.1% of men and 29.1% of women reported that they engaged in sexual intercourse more than once a week.

### *Prevalence of sexual difficulties*

Early ejaculation (23.3%) was the most common reported sexual difficulty among sexually active men in Australia and approximately two-thirds of the men with this difficulty said that they experienced it sometimes or frequently (Table 2). Erectile difficulty (21.1%) was the second most common male sexual difficulty in the Australian sample, followed by a lack of sexual interest (17.5%). The majority of the men who reported these difficulties said that they

**Table 1. Selected characteristics of the study population, Australia, 2001–2002 (percentage; age-standardised prevalence)**

\*Self-reported 'good' or 'excellent' general health (v. 'fair' or 'poor')

	Men (n = 750)	Women (n = 750)
<i>Age group (years)</i>		
40–49	39.4	40.0
50–59	29.9	31.9
60–69	18.6	17.6
70–80	12.1	10.5
<i>Relationship status</i>		
Married or ongoing partnership	66.4	65.9
Divorced/separated without sex partner	19.0	18.5
Widowed without sex partner	5.0	12.1
Single without sex partner	9.7	3.5
<i>Urban/suburban residential setting</i>	69.5	71.0
<i>Education</i>		
Primary school or less	32.3	30.2
Secondary/high school	44.0	49.1
At least some college	23.8	20.7
<i>Household income</i>		
Low (less than USD\$20 000 per year)	33.6	39.6
Medium (USD\$20 000 to 30 000 per year)	25.8	25.8
High (more than USD\$30 000 per year)	40.6	34.6
<i>Currently employed</i>	65.3	55.7
<i>Religion</i>		
Christian	75.0	85.0
Jew	0.3	0.4
Atheist	1.8	0.6
Not specified	22.4	13.9
<i>Good to excellent general health*</i>	80.3	80.4
<i>Intercourse in the past 12 months</i>		
40–49	93.6	90.2
50–59	85.7	77.9
60–69	79.1	57.3
70–80	48.9	24.4
<i>Intercourse more than once a week</i>	38.1	29.1

experienced them sometimes or frequently. The other sexual difficulties were experienced less frequently.

Among sexually active women in Australia, a lack of sexual interest (32.8%) was the most common sexual difficulty, followed by difficulty becoming adequately lubricated (26.4%) and an inability to reach orgasm (24.9%) (Table 2). The majority of the women who reported each of these difficulties said that they experienced it frequently or sometimes. The other sexual difficulties investigated were experienced somewhat less frequently. Overall, lack of sexual interest, inability to reach orgasm, finding sex not pleasurable, and experiencing pain during sex were significantly more prevalent among women than men (all  $P$ -values  $< 0.001$ ).

Demographic, socioeconomic, physical and health factors associated with three selected sexual problems in men and women were investigated (odds ratios [OR] from logistic regression). Older age (compared with the referent age of 40 to 49 years) was a significant correlate of erectile difficulties in men; at age 50 to 59 years the OR was 2.02 (95% CI 1.02–4.01;  $P \leq 0.05$ ) and at 60 to 80 years the OR

**Table 2. Age-standardised prevalence of sexual problems in men and women in Australia by severity, 2001–2002**

Note: based on reports from sexually active respondents. Percentage in the first row of each panel indicates the country average of sexual problem, defined as an experience of problem for a period of 2 months or more. The difference between the country average and the sum of the three levels of severity of sexual problem indicates the proportion who failed to specify the level of severity

	% Men (95% confidence interval)	% Women (95% confidence interval)
Early ejaculation	23.3 (22.7, 24.0)	–
Occasional	7.7 (6.9, 8.5)	–
Sometimes	10.0 (9.2, 10.8)	–
Frequent	5.7 (5.0, 6.5)	–
Erectile difficulties	21.1 (20.4, 21.9)	–
Occasional	6.0 (5.3, 6.9)	–
Sometimes	8.5 (7.7, 9.4)	–
Frequent	6.6 (5.8, 7.5)	–
Lack of sexual interest	17.5 (16.8, 18.5)	32.8 (32.1, 33.5)
Occasional	6.7 (5.9, 7.5)	9.7 (8.9, 10.6)
Sometimes	6.6 (5.8, 7.4)	14.1 (13.3, 14.9)
Frequent	4.3 (3.5, 5.2)	9.0 (8.3, 9.9)
Inability to reach orgasm	13.9 (13.1, 14.6)	24.9 (24.2, 25.7)
Occasional	6.4 (5.7, 7.3)	8.5 (7.6, 9.3)
Sometimes	4.5 (3.7, 5.4)	12.4 (11.7, 13.3)
Frequent	2.9 (2.1, 4.0)	4.0 (3.2, 4.9)
Sex not pleasurable	8.1 (7.3, 8.9)	18.2 (17.5, 19.0)
Occasional	2.8 (2.1, 3.7)	5.6 (4.8, 6.5)
Sometimes	3.3 (2.6, 4.1)	9.0 (8.2, 9.9)
Frequent	2.0 (1.2, 3.1)	3.6 (2.8, 4.5)
Pain during sex	2.7 (2.0, 3.6)	8.7 (8.0, 9.5)
Occasional	2.1 (1.4, 3.2)	2.8 (2.1, 3.7)
Sometimes	0.6 (0.1, 1.8)	3.9 (3.2, 4.8)
Frequent	0.0 (0.0, 0.0)	2.0 (1.3, 3.0)
Lubrication difficulties	–	26.4 (25.7, 27.2)
Occasional	–	4.4 (3.6, 5.3)
Sometimes	–	12.4 (11.6, 13.2)
Frequent	–	9.7 (8.9, 10.5)

was 4.30 (95% CI 2.16–8.56;  $P \leq 0.001$ ). Among women, the age range of 50 to 59 years was associated with increased likelihood of lubrication difficulties (OR 1.98, 95% CI 1.24–3.16;  $P \leq 0.001$ ), whereas the age range of 60 to 80 years was associated with a significantly reduced likelihood of experiencing an inability to reach orgasm in women (OR 0.45, 95% CI 0.21–0.97;  $P \leq 0.05$ ), compared with the referent age range of 40 to 49 years. A lower than average level of physical activity was a significant correlate of erectile difficulties in men (OR 2.50, 95% CI 1.26–4.97;  $P \leq 0.01$ ), and a medium or high (compared with low) household income was a significant correlate of an increased risk of lubrication difficulties among women (OR 1.69, 95% CI 1.01–2.82;  $P \leq 0.05$ ) and a decreased risk of lack of sexual interest in men (OR 0.55, 95% CI 0.31–0.97;  $P \leq 0.05$ ). The impact of a diagnosis of several common health conditions was

**Table 3. Prevalence of selected help seeking behaviours for sexual problems in Australia, by gender, 2001–2002**

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

	% (95% confidence interval)
<i>Men</i>	
Talked to partner	37.1 (36.2, 38.0)
Talked to medical doctor	21.4 (20.4, 22.4)
Taken drugs/used devices or talked to pharmacist	13.0 (12.0, 14.1)
Looked for information anonymously (in books/magazines or via telephone help-line/internet)	11.3 (10.3, 12.4)
Talked to family member/friend	4.4 (3.3, 5.6)
Talked to psychiatrist, psychologist or marriage counsellor	2.1 (1.2, 3.7)
Talked to a clergy person or religious adviser	0.3 (0.0, 3.6)
<i>Sought no help from a health professional</i>	77.6 (77.0, 78.1)
<i>No action taken</i>	50.0 (49.2, 50.8)
<i>Women</i>	
Talked to partner	37.2 (36.4, 38.0)
Talked to medical doctor	20.2 (19.3, 21.1)
Looked for information anonymously (in books/magazines or via telephone help-line/internet)	13.1 (12.2, 14.0)
Taken drugs/used devices or talked to pharmacist	11.8 (11.0, 12.8)
Talked to family member/friend	11.0 (10.1, 12.0)
Talked to psychiatrist, psychologist or marriage counsellor	3.0 (2.0, 4.1)
Talked to a clergy person or religious adviser	0.3 (0.0, 3.9)
<i>Sought no help from a health professional</i>	76.6 (76.1, 77.1)
<i>No action taken</i>	49.9 (49.1, 50.7)

investigated, and it was observed that depression was a significant correlate of a lack of sexual interest (OR 2.28, 95% CI 1.47–3.53;  $P \leq 0.001$ ) and lubrication difficulties (OR 1.89, 95% CI 1.15–3.11;  $P \leq 0.01$ ) in women; diabetes was a significant correlate of male erectile difficulties (OR 2.33, 95% CI 1.10–4.90;  $P \leq 0.05$ ).

#### Help-seeking behaviour

The prevalence of selected help-seeking behaviours for sexual difficulties among men and women in Australia is summarised in Table 3. Of the sexually active respondents who reported experiencing at least one sexual difficulty, 50.0% of men and 49.9% of women had not taken any action. Patterns of help-seeking behaviours were remarkably similar among men and women in Australia and talking to their partner was the most common action, reported by 37.1% of men and 37.2% of women. More women than men had talked to a family member or friend (11.0% v. 4.4%,  $P=0.001$ ), whereas very few respondents of either gender had talked to a psychiatrist, psychologist or marriage counsellor (2.1% of men and 3.0% of women) or to a member of the clergy or other religious adviser (0.3% men and women). Only 21.4% of men and 20.2% of women said that they had talked to a medical doctor about their sexual difficulty(ies), and 13.0% of men and 11.8% of women

had talked to a pharmacist or had used drugs or devices, but the majority of men (77.6%) and women (76.6%) had sought no help from a health professional.

#### Factors associated with seeking medical help for sexual difficulties

Some factors that might be associated with seeking medical help for sexual difficulties were investigated using logistic regression. A significant effect of age was seen in men, compared with the referent group which was aged 40 to 49 years, at age 60 to 69 years the OR was 5.80 (95% CI 1.78–18.84;  $P \leq 0.001$ ) and at 70 to 80 years the OR was 4.58 (95% CI 1.17–18.02;  $P \leq 0.05$ ). Erectile difficulties in men (OR 5.32, 95% CI 2.27–12.48;  $P \leq 0.001$ ) and lubrication difficulties in women (OR 2.80, 95% CI 1.48–5.33;  $P \leq 0.001$ ) were significant correlates of seeking medical help for sexual difficulties. Interestingly, among women, having a medium or high (compared with low) household income was a significant negative correlate of seeking medical help for sexual difficulties. Several sexual beliefs and attitudes were significantly correlated with seeking medical help for sexual difficulties. These were: among both men and women, having been asked by a doctor about possible sexual difficulties during a routine visit in the past 3 years (OR 8.37 and 5.92, respectively); among men only, being very or somewhat dissatisfied with own sexual functioning (OR 2.99, 95% CI 1.22–7.32;  $P \leq 0.05$ ) and a belief that decreased sexual ability would significantly affect own self-esteem (OR 3.66, 95% CI 1.47–9.09;  $P \leq 0.01$ ); and among women only, a belief that sex is a very or extremely important part of overall life (OR 2.21, 95% CI 1.09–4.49;  $P \leq 0.05$ ).

#### Attitudes and beliefs about diagnosis and treatment of sexual difficulties

The reasons for not consulting a doctor about a sexual difficulty that were cited most frequently by respondents in Australia were thinking it is not very serious or waiting for the difficulty to go away (50.0% of men and 54.1% of women) and believing that it is a normal part of aging or being comfortable as he/she is (48.7% of men and 44.9% of women) (Table 4). Somewhat fewer men and women cited thinking that it is not a medical difficulty or that a doctor could not do much about it (26.4% of men and 20.7% of women) and even fewer cited embarrassment about discussing sexual difficulties with their medical doctor (11.9% of men and 8.3% of women). Lack of access to or affordability of medical care were cited as reasons by only 5.6% of men and 3.0% of women. Very few respondents in Australia had been asked by a doctor about possible sexual difficulties during a routine visit in the past 3 years (6.5% of men and 5.8% of women) but ~40% of men (46.8%) and women (39.0%) thought that a doctor should routinely ask patients about their sexual function.

#### Discussion

The present study reports population-level data on sexual behaviour, the prevalence of sexual difficulties and associated help-seeking behaviours among middle-aged and older adults in Australia, being the first to do so for the 60 to 80 year age group.



**Table 4. Attitudes, behaviours and beliefs about diagnosis of and treatment for sexual problem in Australia, by gender, 2001–2002**

	% (95% confidence interval)
<i>Men</i>	
Reasons for not consulting a doctor about the experienced sexual problem <sup>A</sup>	
Did not think it was very serious/waiting if problem goes away	50.0 (49.1, 50.9)
Normal with aging/I am comfortable the way I am	48.7 (47.8, 49.6)
Doctor cannot do much/do not think it is a medical problem	26.4 (25.3, 27.5)
Not comfortable talking to a doctor/doctor is a close friend/doctor is the wrong gender	11.9 (10.7, 13.1)
Do not have a regular physician/doctor is expensive	5.6 (4.4, 7.0)
Doctor uneasy to talk about sex	3.0 (1.9, 4.5)
Have been asked by a doctor about possible sexual difficulties in a routine visit in the past 3 years <sup>B</sup>	6.5 (5.8, 7.2)
Think a doctor should routinely ask patients about their sexual function <sup>B</sup>	46.8 (46.3, 47.3)
<i>Women</i>	
Reasons for not consulting a doctor about the experienced sexual problem <sup>A</sup>	
Did not think it was very serious/waiting if problem goes away	54.1 (53.3, 54.9)
Normal with aging/I am comfortable the way I am	44.9 (44.0, 45.8)
Doctor cannot do much/do not think it is a medical problem	20.7 (19.7, 21.8)
Not comfortable talking to a doctor/doctor is a close friend/doctor is the wrong gender	8.3 (7.3, 9.4)
Do not have a regular physician/doctor is expensive	3.0 (2.0, 4.3)
Doctor uneasy to talk about sex	1.3 (0.4, 2.9)
Have been asked by a doctor about possible sexual difficulties in a routine visit in the past three years <sup>B</sup>	5.8 (5.1, 6.6)
Think a doctor should routinely ask patients about their sexual function <sup>B</sup>	39.0 (38.5, 39.6)

<sup>A</sup>Based on reports from sexually active respondents complaining of at least one sexual problem who have not consulted a doctor.

<sup>B</sup>Based on all respondents. All prevalences are adjusted according to the age distribution of the total of sexually active men and women in Australia in this sample.

Face-to-face interviews were not used because they may cause excessive embarrassment when individuals are asked to provide information about private and sensitive matters, and may also increase the likelihood that respondents will feel obliged to give 'socially desirable' answers.<sup>20</sup> Only sexual difficulties that persisted with moderate to higher frequency were considered to be 'sexual problems'.<sup>21</sup> This approach minimises the risk of false-positive responses. It does mean, however, that the prevalence of sexual problem may have been under-reported

in our survey in comparison with studies that used more sensitive, but less specific, methods. The presence of sexually related personal distress was not measured in our survey and represents a limitation of our study, since such assessment is prerequisite for a diagnosis of female sexual dysfunction according to the American Psychiatric Association.

When estimating the prevalence of sexual difficulties, we have only included individuals who are sexually active. Individuals with sexual difficulties may cease being sexually active as a consequence of sexual difficulties, this may have underestimated our prevalence estimates. Our findings were similar to those reported by Najman *et al.*<sup>10</sup> in the age category (40 to 59 years). The prevalence of lack of interest in having sex was 14.5–17.0% among men in our study v. 14–16% in their survey, and 28–39% v. 34–35% among women, respectively. Erectile difficulties (10–18% v. 8–20%) in men and lubrication difficulties in women (21–34% v. 23–33%) were also reported in similar frequencies in both studies. But inability to reach orgasm was more prevalent among both men (9–12% v. 5–9%) and women (19–36% v. 17–26%) in our sample as compared with participants enrolled in Najman and colleague's study.<sup>10</sup>

Some estimates in the present study, however, are quite different from those of other similar Australian study, where Richters *et al.*<sup>11</sup> reported a prevalence of pain during sex of between 15.2% to 18.0% (women age 40–59), compared with 8.7% (women over 40) in our study. They also found a prevalence of lack of sexual interest of 56.5% to 60.9% (women age 40–59) compared with 32.8% (women over 40) in the present study. Although the above differences may be real, they may also result from the different age distribution of study individuals or other distinctions between the participants in each study. However, we cannot rule out that response bias in our survey might have played a role in the genesis of these discrepancies.

The overall response rate in Australia (16.9%) was quite low. 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. It is well known, that people are in general highly resistant to telephone interviewing and are likely to decline to participate; regardless of the subject matter (especially if no callbacks are allowed, as in our survey). Systematic bias in response that is tied in unknown ways to the variables of interest is the key concern. The prevalence of self-reported health conditions such as diabetes (7.5%), smoking (21%) and depression (15%) in our study was comparable with published values, 8%, 23% and 17%, respectively.<sup>22–25</sup> This suggests that the study population was broadly representative of the general population. However, some of our findings differ from those of previous Australian studies and we cannot exclude the possibility that the low response rate may have introduced bias into our results.

A diagnosis of diabetes was a significant correlate of ED in our study. Several studies have shown ED to be more prevalent in diabetic individuals, which of the several aspects of diabetes is the direct causative agent of ED is controversial. Vascular disease, autonomic neuropathy, gonadal dysfunction, and vascular endothelium or neurogenic impairment of penile smooth muscle relaxation are frequently mentioned. In

addition, possible treatment side effects have also been implicated.<sup>26</sup>

Increasing age and a lower-than-average level of physical activity were also significant correlates of ED in our study. These findings are consistent with earlier studies of sexual difficulties in Australia, which have also shown that the prevalence of ED increases with age<sup>9–11</sup> and that a history of vigorous exercise is protective against ED across all age groups.<sup>9</sup> Increasing age appears to have less consistent effects in women in our sample; however, as the age range of 50 to 59 years was significantly associated with lubrication difficulties (compared with the referent group aged 40 to 49 years), the oldest age range of 60 to 80 years was negatively correlated with an inability to reach orgasm. The age range of 50 to 59 years is significant for women as it is the age at which many may experience menopause. A decline in female sexual functioning, including a significant increase in vaginal dryness during the menopausal transition has been observed previously in the Melbourne Women's Midlife Health Project.<sup>27</sup>

A diagnosis of depression was a significant correlate of a lack of sexual interest and lubrication difficulties in women in Australia but, interestingly, the condition showed no significant correlation with any of the selected male sexual problems. When considering the co-presence of depression and sexual problem, the possible role of antidepressant treatments must also be taken into account. Sexual dysfunction is a frequent adverse effect of antidepressant therapy; however, the reported rates of dysfunction vary according to the treatment used.<sup>28–30</sup> The selective serotonin reuptake inhibitors (SSRI) appear to be associated with particularly high rates of sexual dysfunction and although men taking SSRI report higher rates of sexual side effects than women, women seem to experience more severe dysfunction.<sup>29,31,32</sup> Recent health surveys conducted in Australia have concluded that although depression is a major health difficulty, which is highly prevalent in the community, the condition is often poorly recognised and under-treated.<sup>22,23</sup> Although the precise nature of the relationship between depression and sexual dysfunction is unclear, the significant correlations identified in the female Australian GSSAB cohort highlight the strong links between these conditions.

About one-half of all men and women in our study had taken no action with regards to seeking help or advice for their sexual difficulties and only ~20% had consulted a medical doctor. The findings of the study indicate that many Australian men and women do not perceive sexual difficulties as significant or potentially treatable medical difficulties, or are not particularly bothered by them; this may be deterring them from raising the subject of their sexual functioning with their doctor. Furthermore, it seems that doctors in Australia rarely ask patients about their sexual health during a routine consultation, even though this would be welcomed by ~40% of men and women. It is important that physicians initiate discussions about sexual health with their patients, and incorporate questions about sexual functioning into their routine patient work-ups.<sup>33</sup>

We conclude that middle-aged and older men and women in Australia continue to show sexual interest and activity, despite the presence of several sexual difficulties. Few of the individuals

who experience such difficulties seek medical help, perhaps because they do not perceive their condition as sufficiently severe, potentially treatable, or sufficiently upsetting. Appropriate guidance from physicians and other healthcare professionals may encourage patients to discuss their sexual problems.

### Conflicts of interest

Edson Moreira is a consultant for Pfizer. Dale B Glasser is employed by Pfizer Inc.; and has stock ownership or options (other than mutual funds) in Pfizer Inc. Rosie King works as a consultant for Pfizer. Fernanda Gross Duarte declares no conflict of interest. Clive Gingell works as a consultant for Pfizer. The Global Study of Sexual Attitudes and Behaviours was funded by Pfizer Inc.

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**Appendix 1: Ascertainment of sexual difficulties**

Asked of every subject who had engaged in sexual intercourse (defined as any intimate behaviour including: penile–vaginal/anal intercourse, oral contact with genitals/breasts/nipples, or touching yours/other’s genitals) during the previous 12 months.

During the last year have you ever experienced any of the following for a period of two months or more when you . . . ? (PLEASE CHECK ALL THAT APPLY):

- . . .lacked interest in having sex? [  ].
- . . .were unable to reach climax? (experience orgasm) [  ].
- . . .reached climax (experienced orgasm) too quickly? [  ].
- . . .experienced physical pain during intercourse? [  ].
- . . .did not find sex pleasurable? [  ].
- . . .**(MEN ONLY)** had trouble achieving or maintaining an erection? [  ].
- . . .**(WOMEN ONLY)** had trouble becoming adequately lubricated? [  ].