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Relationship between hypoactive sexual desire disorder and aging

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ABSTRACT

Objective: Explore the association between Hypoactive Sexual Desire Disorder (HSDD) and aging. The American Foundation of Urologic Disease and the American Psychiatric Association stipulate that HSDD is only diagnosed when both low sexual desire and sexually related personal distress are present.

Design: Community-based, cross-sectional study.

Setting: Europe (UK, Germany, France, Italy) and the USA.

Patient(s): Women aged 20-70 in sexual relationships participating in the Women's International Study of Health and Sexuality (n_1998 Europe, n_1591 USA).

Intervention(s): No interventions were administered.

Main Outcome Measures: Self-administered questionnaire that included two validated instruments: Profile of Female Sexual Function© measured sexual desire; Personal Distress Scale© measured sexual distress. Women with low desire and distress were considered to have HSDD.

Results: The proportion of European women with low desire increased from 11% amongst women aged 20-29 years to 53% amongst women aged 60-70 years. The proportion of American women with low desire displayed a trend towards an increase with age. In the 20-29 year age group 65% of European women and 67% of American women with low sexual desire were distressed by it. This decreased to 22% and 37%, respectively, in the 60-70 year age group. In Europe and the USA the prevalence of HSDD in the population did not change significantly with age (6-13% in Europe, 12-19% in the USA).

Conclusions: The proportion of women with low desire increased with age while the proportion of women distressed about their low desire decreased with age. Consequently, the prevalence of HSDD remained essentially constant with age. This may explain why no association between HSDD and age is often reported in the literature. (Fertil Steril_ 2007;87:107–12. ©2007 by American Society for Reproductive Medicine.)

INTRODUCTION

Our recent review of the literature (1) indicates that as women age an increasing number experience low sexual desire. Thus, one might expect the proportion of women who experience a loss of sexual desire with associated distress or Hypoactive Sexual Desire Disorder (HSDD) might increase with age as a result. However, most studies report no change in the prevalence of HSDD with age (2–5). The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM-IV) and American Foundation of Urologic Disease (AFUD) stipulate that both low sexual desire and sexually related personal distress need to be present for a diagnosis of HSDD (6, 7).
Research investigating the distress component of HSDD and its relationship with age is limited. Bancroft and co-workers explored distress about the relationship and one's own sexuality in women (8). In selected comparisons, both forms of distress increased slightly with age. However for the most part there was no significant relationship with age. Laumann et al (2) reported that anxiety about sexual performance decreased with age. Richters et al (9) found that whilst anxiety during sex remained constant with age, worrying about attractiveness decreased. We hypothesised that agerelated decreases in the sexual distress component of HSDD is one of the reasons why the prevalence of HSDD does not increase with age.

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MATERIALS AND METHODS

The Women's International Study of Health and Sexuality (WISHeS) is a cross-sectional, community-based study, conducted in 1999-2000, that utilized large market research databases to recruit women from the United States, UK, Germany, France and Italy. The study was implemented by the GfK group (Nuremberg, Germany) in Europe and the NPD group (Acquired by IPSOS Group in 2001) in the USA. Women registered in these databases had agreed to be contacted regarding research. A letter sent to women in the appropriate age range informed them that a national research study on women's health issues was going to be conducted and they would be contacted by telephone. Eligible women who agreed to participate during the telephone call were sent the survey to complete by return mail.
In Italy, researchers employed a random door knock method to inform women about the study, determine their eligibility and obtain consent. The questionnaire was left with those women who qualified and agreed to participate and picked up from their homes at a later date. Overall approximately 70% of women who received the survey completed and returned it. Schulman Associates Institute Review Board, Inc., Cincinnati, Ohio approved the WISHeS.

Sample

The total sample consisted of 3589 women: 1591 from the USA and 1998 from Europe. The inclusion criteria were age 20-70 years, residency in USA, UK, Germany, France, or Italy, literacy in the language of the country of residence and being in a current sexual relationship. After eliminating missing and incomplete data, the sample for this analysis was slightly reduced to 1547 women from the USA and 1879 women from Europe.

Measures

The WISHeS questionnaire covers general health, hormone therapy and menopause, sexuality and relationships. The sexuality section of the questionnaire, analysed in this study, included two validated instruments: the Profile of Female Sexual Function© (PFSF©) and the Personal Distress Scale© (PDS©). The Profile of Female Sexual Function is a patient-based, self report instrument. It is designed to assess sexual desire and related domains of women's sexual response over the last 30 days. It has been described in detail elsewhere (10, 11). The PFSF has demonstrated excellent discriminate validity (10), good internal consistency, test-retest reliability and appropriate correlation among domains (11). A cut-off score on the desire domain of the PFSF was used to classify women with low sexual desire.
The Personal Distress Scale is a patient-based scale developed to measure distress due to lack of sexual desire and, like the PFSF, uses a 30 day recall (12). A cut-off score on the PDS was used to classify women with low sexual desire as distressed or non-distressed. Women with both low desire and sexual distress, as determined by the PFSF and PDS, were considered to have HSDD, consistent with DSM-IV and AFUD definitions.

RESULTS

Sample Profile Description

The demographics for the women studied in this analysis are shown in Table 1.

Low sexual desire

In Europe the proportion of women with low desire increased significantly with age (figure 1). 11% (95% CI 6-16%) of European women aged 20 to 29 years had low sexual desire compared with 53% (95% CI 47-59%) of European women aged 60 to 70 years. Amongst American women there was a non-significant trend toward an age-related increase in the proportion of women with low desire. In the 30-39 year age group a higher proportion of American women had low sexual desire compared to European women. In the 60-70 year age group the reverse was true with the prevalence of low desire being higher amongst European women.

Sexual distress amongst women with low desire

In both Europe and the USA the proportion of women who were distressed by low desire decreased significantly with age (figure 2). In the 20 to 29 year age group, 65% (95% CI 42-88%) of European women and 67% (95% CI 49-85%) of American women with low desire were distressed by it. In the 60 to 70 year age group only 22% (95% CI 15%-29%) of European women and 37% (95% CI 25%-49%) of American women were distressed by low desire. Compared to European women, a higher proportion of American women in the 30-49 year age group were distressed by low desire.

Prevalence of HSDD in the population

The prevalence of HSDD ranged from 6% to 13% in Europe and 12% to 19% in the USA. The prevalence of HSDD was significantly higher amongst American women in the 30-39 age range compared with European women the same age. However, in both Europe and the USA the prevalence of HSDD did not change significantly with age.

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DISCUSSION

These results provide further evidence that the proportion of women experiencing low desire increases with age. In the European countries investigated, the prevalence of low desire increased significantly with age with women in their sixties having almost five times the prevalence of women in their twenties. There was also a trend toward an age-related increase in the prevalence of low desire amongst American women. These results are supported by a number of previous investigations (1, 8, 13, 14). We have also demonstrated that there is an age-related decline in the proportion of women distressed by low desire in both the United States and the European countries investigated. The proportion of younger women distressed by low desire was up to three times that of older women.
These findings provide an explanation for a paradox in the published literature. Despite reports that a higher proportion of older women experience low desire (8, 13, 14), most investigations have indicated that the prevalence of desire problems or HSDD do not increase with age (2-5). Our results indicate that in both the American and European populations investigated, age related increases in the prevalence of low desire are counter-balanced by decreases in the proportion of these women who were distressed by low desire. Consequently, we observed no significant change in the prevalence of HSDD with age. This provides an explanation as to why no association between HSDD and age is often reported in the literature.
We have also demonstrated differences between American and European women with respect to HSDD and its components. Compared to their European contemporaries, American women in their thirties had a higher prevalence of low desire and a greater proportion of these women were distressed by it. This translated into a greater prevalence of HSDD amongst American women in this age group. This trend was reversed in the in the 60-70 year age bracket where the prevalence of low desire was higher amongst European women. However, in this age group there was no difference between American and European women in the proportion of women distressed by low desire or the prevalence of HSDD.
A major advantage of this investigation over previous studies is that HSDD has been assessed using validated instruments to determine low desire and sexual distress. This has rarely been the case in previous studies (1, 2, 9). Examining low desire and distress separately has allowed us to see the effect each component has on the prevalence of HSDD. The differences we have observed between age groups and populations would have been missed if we had only examined aggregate data.
This study is community-based, has included over 3000 participants and achieved a good response rate. The use of clinical populations, small samples or convenience samples limit the generalizability of many epidemiological studies in this area (15-20). Many investigations also suffer from low response rates which can bias samples toward women who are comfortable discussing sexual matters (19-21). The differences we have reported between age groups are not necessarily a consequence of the aging process alone. Other factors including the age, health, hormonal status, and sexual functioning of women's partners and the length of their relationships may play a role. In addition, with a cross-sectional design, age and birth cohort effects are inev- itably confounded and the ability to established causation is limited since exposures and outcomes cannot be separated in time.
To date the PFSF and PDS have only been validated in limited populations of women, i.e., surgically and naturally postmenopausal women (10, 11). The inclusion criteria and sampling frame used may have some impact on the generalisability of these findings. Whilst the sample is communitybased, it was randomly sampled from existing consumer databases rather than being randomly drawn directly from the population. Also, only women in current sexual relationships were included in this analysis to eliminate the effects of not having a partner.
Medical practitioners and researchers should be aware that a large proportion of older women experience low desire (32% of American women, 53% of European women), even though most may not be sufficiently distressed to report it. Older women may perceive that it is a natural phenomenon for women to lose sexual desire as they age. If this perception changes, more women may feel distressed about their loss of desire. If this happened we would expect to see a sharp rise in the prevalence of HSDD amongst older women since so many of these women are already experiencing low desire.
This study raises a number of questions for future research. We do not know why the prevalence of low desire increases more steeply with age in Europe than in the USA. Compared with their European contemporaries, a higher proportion of American women in their thirties experience low desire and a higher proportion of American women in their thirties and forties are distressed by their low desire. Also, the decrease in the proportion of women reporting distress with age is not well understood.
European and American populations may differ in a number of respects that might explain these differences in sexual desire and distress. A range of factors warrant further investigation. The overall health of women in each population, their use of hormone therapies and their use of other medications may affect the proportion of women experiencing low sexual desire. There may also be differences in relationship factors with potential to affect women's sexual desire including the age, health and sexual function of their partners and the length of their relationships. Investigating differences in cultural and social factors, including sexual expectations of European and American women may be particularly helpful in explaining population differences in the level of sexual distress associated with low sexual desire.
How much of the difference in sexual desire and sexual distress between age groups can be attributed to the aging process and how much is due to other factors associated with age is still unclear. Future research may provide additional insights and understanding of the biological, psychological, or sociological factors that contribute to low sexual desire and distress experienced by women of all ages.

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CONCLUSION

These data show the prevalence of low desire increasing with age whilst the proportion of women distressed by it decreases. This provides an explanation as to why no association between HSDD and age is often reported in the literature. These results also highlight the importance of stratifying data by age and examining sexual desire and distress separately when investigating HSDD.

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TABLE 1. Demographic characteristics of women in the analyzed sample

Variable	Europe (N=1998)	USA (N=1591)
Age - years	47.0	47.3
Marital Status - n (%)		
• Married	1718 (86)	1321 (83)
• Single	140 (7)	95 (6)
• Divorced	100 (5)	143 (9)
• Widowed	40 (2)	32 (2)
Time With Current Sexual Partner - years	22.4	19.7
Used hormone therapy in the past 3 mos. - n (%)	380 (19)	493 (31)
Currently taking oral contraceptives - n (%)	380 (19)	191 (12)
Body Mass Index	26.1	28.5
Cigarette Smoking in an average week - n (%)		
• Do Not Smoke	1399 (70)	1161 (73)
• 1-7 packs	420 (21)	255 (16)
• 8-14 packs	100 (5)	111 (7)
• 15+ packs	6 (<1)	16 (1)
Servings of alcohol in an average week - n (%)		
• 4 per week	240 (12)	127 (8)
• 2-3 per week	300 (15)	175 (11)
• 1-2 per week	500 (25)	190 (12)
• 1 per month	160 (8)	127 (8)
• <1 per month	400 (20)	461 (29)
• None	400 (20)	509 (32)

FIGURE 1

The proportion of women in the total population with low desire. Europe: n=1879 **(A)**, USA: n=1547 **(B)**. Proportions and 95% confidence intervals are shown.

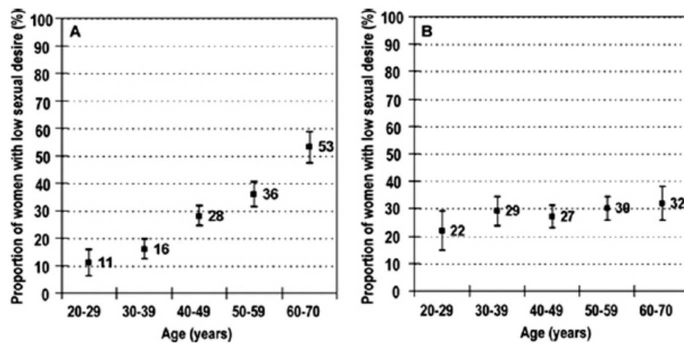

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FIGURE 2

Distress amongst women with low desire. Europe: n=554 **(A)**, USA: n=427 **(B)**. Proportions and 95% confidence intervals are shown.

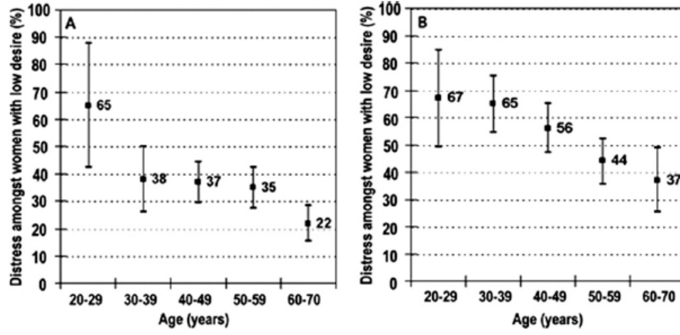

FIGURE 3

The proportion of women in the total population with HSDD (low desire and distress). Europe: n=1879 **(A)**, USA: n=1547 **(B)**. Proportions and 95% confidence intervals are shown.