Socio-economic and lifestyle factors associated with sexual dissatisfaction among men and women

ANQUETIL M[1], BAUMANN M[1], LEGLEYE S[2,3], CHAU N[2] and LORHANDICAP GROUP[2]

[1] Unit research INSIDE, University of Luxembourg;
[2] INSERM, U669, Paris; Univ Paris-Sud and Univ Paris Descartes, UMR-S0669, Paris, France;
[3] Observatoire français des drogues et toxicomanies (OFDT), Paris, France.
Lorhandicap group: N Chau, F Guillemin, JF Ravaud, J Sanchez , S Guillaume, JP Michaely, C Otero Sierra, B Legras, A Dazord, M Choquet, L Méjean, N Tubiana-Rufi, JP Meyer, Y Schléret, JM Mur

Introduction

Sexual dysfunction and dissatisfaction are highly prevalent worldwide [1]. Predictive variables include a number of socio-economic conditions, and lifestyle and health-related factors such as older age, obesity, physical and mental health (cardiovascular disease, rheumatoid arthritis, metabolic disease urinary tract symptoms, depression, psychological morbidity, etc), quality of relationships, life situation, and physical disability [2-7]. To our knowledge, no population-based investigation has been conducted to date on these factors. Research is therefore needed to refine our understanding of sexual dissatisfaction among both men and women. The information provided by such work can be expected to be particularly useful to general practitioners and other health professionals trying to help the individuals concerned [8].

We studied the associations of age, education, family condition, socio-economic category, income, obesity, smoking, alcohol abuse, general health status, fatigue, sleep disorders, depression/sadness, medical conditions, and physical and cognitive disabilities with sexual dissatisfaction among both sexes in north-eastern France.

Materials and methods

The initial sample consisted of everyone aged 15 years or more living in 8,000 randomly selected households in the Lorraine region of north-eastern France (2.3 million inhabitants). Only households with a telephone were eligible. Before the initial survey, a 3-month media campaign (television, print, and radio) was conducted in order to raise awareness. The investigation was approved by the Commission Nationale d'Informatique et Libertés, and written informed consent was obtained from respondents.

The study protocol included: (a) an application to participate that ascertained the number of people in the household, and (b) three standardized self-administered questionnaires with a covering letter and a pre-paid envelope for the reply. Mailings were made at 1-month intervals.

Of the 8,000 households included in the sample, mailings to 193 (2%) were lost (due to address error or death). Of 7,807 households contacted, 3,460 (44%) participated (all eligible members of the family took part in 86% of those). In total, 6,234 subjects filled in a questionnaire; 18 were of unknown sex or age, leaving 6,216 subjects who were similar in age and sex distribution to the Lorraine population [9].

Questionnaires were completed by the subjects themselves. Questions covered: sex, date of birth, height, weight, educational level, smoking habit, alcohol abuse, family conditions, perceived income, disorders diagnosed by a physician, disabilities, and sexual dissatisfaction.

Nine socio-economic categories were considered: upper professionals, intermediate professionals, manual workers, employees, farmers, craftsmen/tradesmen, students, housewives, and others and unknown. Obesity was defined as body mass index $\geq$30 kg/m^2. Alcohol abuse was defined using the DETA-CAGE questionnaire (at least two positive responses to four items: (i) consumption considered excessive by the subject; (ii) consumption considered excessive by people around the subject, (iii) subject wishes to reduce consumption, and (iv) consumption on waking) [10]. With regard to perceived income, subjects were asked whether they considered

themselves: comfortable or well off, earning just enough, coping but with difficulties, or getting into debt; low income was defined by coping, but with difficulties, or getting into debt.

The following categories of disabilities were considered [11]: (1) Physical with 20 items: self-care (2 items: dressing yourself, including tying shoelaces and doing buttons; shampooing hair), rising (2 items: standing up from a straight chair; getting in and out of bed), eating (3 items: cutting meat; lifting a full cup or glass to your mouth; opening a new milk carton), walking (2 items: walking outdoors on flat ground; climbing up five steps), hygiene (3 items: washing and drying your body; taking a tub bath; getting on and off the toilet), reaching (2 items: reaching and getting down a 2.5 kg object from just above your head; bending down to pick up clothing from the floor), gripping (3 items: opening car doors; opening jars which have been previously opened; turning faucets on and off), and activities (3 items: running errands and shopping; getting in and out of a car; doing chores such as vacuuming or yard-work); and (2) Cognitive disability with four items: concentration/attention, orientation, problem-solving, and memory. The subjects were asked the following: 'Indicate the response which corresponds to your abilities during the 8 last days for the following activities'. Available responses were: 'without difficulty'/'with some difficulty'/'with great difficulty'/'unable to do'. For each category of disability (physical or cognitive) a subject was considered to have a disability when he/she responded with difficulty or unable to do to at least one of the items concerned.

Fatigue was addressed in the question 'During the past 8 days how much trouble have you had with getting fatigued easily?' (None/Some/A lot). Similarly, sleep disorder was measured with the question 'During the past 8 days how much trouble have you had with sleeping?' (None/Some/A lot), and depression/sadness with 'During the past 8 days how much trouble have you had with feeling depressed or sad?' (None/Some/A lot). Sexual dissatisfaction was addressed in the question 'During the last two months have you been satisfied for your sexual activities' (Very satisfied or satisfied/Very dissatisfied, rather dissatisfied or no opinion).

Results

The sample included 6,216 subjects who belonged to the following groups: upper professionals 9%, intermediate professionals 7%, manual workers 21%, employees 24%, farmers 13%, craftsmen and tradesmen 3%, students 10%, housewives 9%, and others or unknown 14%. People with low educational level (primary school) represented 29%, living alone 11%, with low income 9%, obesity 8%, current smoking 26%, alcohol abuse 21%, not-good health status 43%, fatigue 15%, sleep disorder 9%, and depression/sadness 6%. Cardiovascular disease affected 20% of subjects, respiratory disease 9%, cancer 2%, and other diseases 58%.

Sexual dissatisfaction was reported by 36% of men and 43% of women ($p<0.001$). Multivariate analysis using logistic models showed that factors associated with sexual dissatisfaction differed between men and women. Among men, sexual dissatisfaction strongly related to age (over 50 years), living alone (increased risk [IR] 2-fold), not-good health (IR 1.8-fold), respiratory disease (IR 34%), physical disability (IR 51%), cognitive disability (IR 69%), fatigue (IR 43%), depression/sadness (IR 65%), and upper professional category (IR 38% vs. all other professionals). Among women, sexual dissatisfaction strongly related to age (over 40 years), primary education (IR 38%), living alone (IR 2.4-fold), not-good health (IR 52%), physical disability (IR 28%), cognitive disability (IR 57%), fatigue (IR 33%), depression/sadness (IR 48%), insufficient income (36%), and upper professional category (IR 41% vs. all other professionals).

Discussion

Among a regional sample of French people aged 15 years or more, sexual dissatisfaction was common and more prevalent among women than men. Separate analyses for women and men demonstrated that several risk factors were gender-specific: higher risk for older age, primary education, and being a housewife for women; and being an intermediate professional and respiratory disease for men. Several factors had similar effects in both sexes: living alone, being

a manual worker (lower risk), being a student, not-good health status, fatigue, depression/sadness, and physical and cognitive disabilities. The methodological limitations have been discussed elsewhere [9].

We found a clear gender difference in terms of prevalence of sexual dissatisfaction according to age. In men, its prevalence increased from the 50-59 years age group while in women it increased more strongly and from the 40-49 years age group. This may be partly attributed to the menopause and associated factors such as bodily and hormonal changes, and difficulties with intercourse, [2] and to life stressors, contextual factors, past sexuality, and mental health problems which are more significant predictors of women's sexual interest midlife than menopause status itself [12].

Table 1. Factors associated with sexual dissatisfaction among men and women

	Men (2,959 subjects)		Women (3,257 subjects)	
Age (yr)				
<20	1.0		1.0	
20-29	1.01	0.72-1.41	1.05	0.78-1.42
30-39	1.10	0.78-1.56	1.28	0.93-1.76
40-49	1.38	0.95-2.00	2.24***	1.59-3.14
50-59	2.84***	1.95-4.14	5.17***	3.66-7.31
60 or over	7.45***	4.90-11.3	12.05***	7.85-18.5
Primary education	0.96	0.78-1.20	1.38**	1.12-1.69
Living alone	2.08***	1.52-2.84	2.43***	1.87-3.15
Socio-economic group				
Upper professionals	1.00		1.00	
Intermediate professionals	0.54**	0.36-0.80	0.83	0.49-1.40
Manual workers	0.68**	0.50-0.91	0.61*	0.38-0.98
Employees	0.88	0.64-1.21	0.70	0.47-1.03
Farmers	0.96	0.57-1.61	0.51	0.25-1.04
Craftsmen/tradesmen	0.90	0.53-1.51	0.67	0.34-1.33
Students	2.38***	1.55-3.65	2.12**	1.33-3.38
Housewives	-		0.54**	0.36-0.83
Others and unknown	1.11	0.77-1.61	0.95	0.62-1.45
Low income (with difficulties)	1.30	0.96-1.77	1.36*	1.02-1.88
Obesity	0.81	0.59-1.11	1.17	0.86-1.59
Smoking	0.87	0.72-1.06	0.89	0.72-1.11
Alcohol abuse	0.98	0.81-1.18	0.97	0.74-1.27
Not-good health status	1.75***	1.43-2.15	1.52***	1.25-1.85
Fatigue	1.43*	1.05-1.93	1.33*	1.05-1.70
Sleep disorders	1.37	0.97-1.95	1.12	0.85-1.49
Depression/sadness	1.65*	1.03-2.64	1.48*	1.08-2.04
Medical disorders				
Respiratory disease	1.34*	1.02-1.75	0.77	0.55-1.06
Cardiovascular disease	1.13	0.90-1.43	1.18	0.94-1.47
Cancer	1.22	0.59-2.53	1.19	0.72-1.96
Other diseases	0.92	0.77-1.13	1.02	0.84-1.23
Physical disability	1.51***	1.19-1.91	1.28*	1.04-1.59
Cognitive disability	1.69***	1.39-2.06	1.57***	1.31-1.88

*p<0.05, **p<0.01, ***p<0.001.

Regarding occupational groups, upper professionals had higher risk, and a significantly lower risk was found for intermediate professionals and manual workers. This study reveals a 2-fold higher risk among male and female students – a finding that underlines the issues raised by Shindel et al. among medical students [13]. Housewives had a 2-fold lower risk. than upper

female professionals. This may be explained by the absence of stressful working conditions. The association between living alone and sexual dissatisfaction for both sexes was expected.

Our findings are important because they show, in agreement with other authors [2-7], that sexual dissatisfaction among men and women is predicted by factors that affect many people in the general population [9, 11]: not-good health status, fatigue, depression/sadness, and physical and cognitive disabilities. Respiratory disease was related to sexual dissatisfaction in men only and, indeed, is more prevalent in men because of occupational exposure and lifestyle [14].

In conclusion, sexual dissatisfaction related to a number of socio-economic and lifestyle factors, and the associations differed between men and women. These findings highlight the benefit of improving living conditions, lifestyle, health status and related risk factors.

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