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ORIGINAL RESEARCH

Reduced sexual desire in a random sample of Norwegian couples*

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ABSTRACT *The purpose of this study was to analyse reduced sexual desire in Norwegian heterosexual couples and to identify factors associated with loss of sexual desire in both men and women. The study comprises a sample of 399 couples (798 individuals) between 22 to 67 years of age. Data were collected by the means of self-administered postal questionnaires. The majority of the couples (59%) did not report distressing problems related to loss of sexual desire. In 26% of the couples the female partner had experienced distressing loss of sexual desire; in 8% of the couples the male partner did, and in 8% of the couples both experienced distressing problems. Most of the men and women who had sexual desire problems believed their loss of sexual desire was related to stress, disease, or “other” factors. Reduced capacity for sexual arousal was the best predictor of loss of desire in both genders. Among women, negative work-to-home interference was related to loss of sexual desire. It seems reduced sexual desire may represent a new area of public health concern in Norway.*

KEYWORDS: *couples; sexual desire; Norway*

Introduction

During the past 20 years, a substantial percentage of the Norwegian population has reported having distressing sexual dysfunctions (MMI, 1987, 1997). An increase in reported reduced sexual desire has been reported as a clinical experience by psychologists in other parts of the world (Leiblum & Rosen, 1988; Regan & Berscheid, 1999). In the applicable literature, the concept “sexual desire” is often used synonymously with “sexual interest” or “sexual lust”. This will also be done in this paper. Empirical evidence on the prevalence of reduced sexual desire in various populations is limited. Also, the understanding of factors which influence the nature

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and intensity of sexual desire is limited, and empirical research has been described as both sparse and lacking in planning (Regan, 1998; Regan & Berscheid, 1999; Rempel & Serafini, 1995). On the background of the existing literature, however, it seems clear that sexual desire is influenced by socio-biological factors (e.g. gender, age, hormonal disturbances, diseases). However, to build a prediction model for reduced sexual desire, other factors must also be considered. Central additional factors are also individual psychological factors (e.g. self-perception, depression, sexual arousal, orgasm frequency), relational factors (e.g. interpersonal communication, satisfaction with domestic division of labour), and contextual factors (e.g. total work load, caring for small children). The socio-biological, individual psychological, relational and contextual factors dealt with in this study will be presented below.

Socio-biological factors

A review of published texts shows the most common sexual dysfunction among women is reduced sexual desire (Hayes *et al.*, 2006). A study based on the general female population of Sweden, Öberg (2005) found that mild or sporadically occurring sexual dysfunctions were much more common than were manifest, and that dysfunctional distress was considerably less common than were dysfunctions *per se*. Twenty-nine percent of Swedish women reported having experienced reduced sexual desire during the past year, and 15% had experienced distressing reduced sexual desire. As the sexual cultures of Norway and Sweden share many similarities, it is reasonable to believe that the prevalence of reduced sexual desire in Norwegian women would be similar. The assumption that men feel sexual desire more frequently than women is widespread in most Western countries (Richgels, 1992; Tolman, 1991). This is reflected in research (Baldwin & Baldwin, 1997; Beck *et al.*, 1991; Hayes *et al.*, 2006; Laumann *et al.*, 1994; Lewin *et al.*, 2000; Metts *et al.*, 1998; Regan & Berscheid, 1995). Furthermore, men seem to report feeling sexual desire more continuously, whereas women seem to perceive their sexual desire as more fluctuant (Hamilton *et al.*, 2001; Hurlbert & Apt, 1994a,b).

Cross-sectional research demonstrates that the level and intensity of sexual desire for both sexes decreases with age (Fugl-Meyer, 2000; Regan & Berscheid, 1999; Öberg, 2005). This is not, however, pronounced until after the age of 50, and may be caused by other factors than the biological ageing process (Fugl-Meyer, 2000). For instance, some have suggested that age, in interaction with various social factors, may be of greater importance (Laumann *et al.*, 1994; Pedersen, 1998).

Relational factors

Definitions of women's sexual dysfunctions and the models of sexual response, which form the basis for these definitions, have recently been revised (Basson, 2005; Basson *et al.*, 2003, 2004). The adequacy of the linear progress of genital response, as described by Masters and Johnson (1966), has been questioned, suggesting that women's sexual experience in contemporary sexual relationships frequently begins for other, contextual reasons than sexual desire. Women's sexual desire is responsive

rather than “innate”, and experienced after arousal. Motivation to move from sexual neutrality to sexual arousal and potential desire, to continue the experience, stems from the need to enhance emotional closeness to the partner, acceptance, bonding, toleration, commitment and love (Basson, 2000, 2002).

To a significant extent, several socio-psychological life-conditions are associated with dysfunctions connected to sexual desire. Controlled for other factors, however, the most prominent variables are the degree of satisfaction with the relationship and the partner's level of sexual functioning (Öberg & Fugl-Meyer, 2005; Öberg *et al.*, 2002). There are indications that men and women experience sexual desire in qualitatively different ways (Oliver & Hyde, 1993), and women seem to emphasise the emotional aspects of sexuality more strongly than men (Hurlbert & Apt, 1994a,b; Laumann *et al.*, 1994). To a lesser extent than men, women want to have intercourse without commitment (Carrol *et al.*, 1985). Women tend to focus on the quality of the relationship in which the sexual activity takes place while men seem to emphasise pleasure to a greater extent than women (Hurlbert & Apt, 1994a,b). It has been argued that couple relationships nowadays are much more dependent on love and sexuality than previously. Love develops to the degree to which intimacy does, to the degree to which the partner is prepared to reveal concerns and needs to the other, that is to be vulnerable in the face of the other (Træen & Sørensen, 2000). This makes interpersonal communication about own needs and desires of vital importance to the relationship itself, and thereby also to sexual desire.

Individual factors

Negative thoughts are likely to be dysfunctional if they occur frequently, are subconsciously initiated, unintentional, and difficult to control (Haaga *et al.*, 1991). Frequent negative thoughts about oneself may be dysfunctional (Verplanken, 2006). Thus, people who often think negatively about themselves may also be more vulnerable to developing sexual problems. However, the relationship between cause and effect is unclear. Having sexual problems may also lead to negative thinking about oneself, and possibly also about the partner.

Attitudes toward sexuality and relationships may also be of importance to sexual desire. McCabe's (1994) found a difference between sexually functional and dysfunctional people as relating to negative attitudes towards sexuality in the subjects' parents. Negative sexual messages and influences imposed or communicated during childhood are commonly believed to cause reduced feelings of sexual desire in adults. There is, however, little empirical evidence to support this theory (Heimann *et al.*, 1986; LoPiccolo & Friedman, 1988; Rempel & Serafini, 1995). It remains to be seen whether sexual experience and attitudes towards sexuality are related to variations in sexual desire within a non-clinical population.

A diary study examined the fluctuation in sexual desire over time in married couples (Ridley *et al.*, 2006). It identified considerable variation in lust patterns. Furthermore, sexual lust was found to be affected by closeness and the existence of a power equilibrium within the couple. Total workload and fatigue may be central factors in relation to reduced sexual desire. For couples in which both partners work

out of home, satisfaction with the division of labour in the household may be of importance in relation to sexual desire. Both work and family responsibilities are changing, and the proportion of women with children in the workforce has increased in many Western countries (Perry-Jenkins *et al.*, 2000). About 77% of Norwegian women between 25 to 66 years of age are employed (Statistics Norway, 2006), and men are expected to be more involved with family life and take a greater amount of responsibility for the caring of children. In a study of Norwegian psychologists, the division of non-paid labour was found to be traditional, and women reported taking more responsibility for household duties than men (Østlyngen *et al.*, 2003). Women also reported being less satisfied with how the responsibility for unpaid work was distributed within the family (Østlyngen *et al.*, 2003). A Swedish study of 2600 white-collar workers made similar findings (Lundberg *et al.*, 1994). For a large number of women the possibility of combining work and family life is associated with increased self-esteem and improved physical and mental health (Marshall, 1994; Verbrugge, 1983). However, balancing family and work roles may increase the likelihood of overloading and may interfere with the performance in both roles for men as well as for women.

Contextual factors

Several studies have examined the effects of work-to-home interference and have discovered it plays a mediating role between work demands and psychological outcomes such as depressive mood, health complaints, burnout, and sleep deprivation (Geurts *et al.*, 1999, 2003). A meta-analysis of several studies examining the relationship between work-to-family conflict and consequences found a mean correlation of $-.23$ between marital satisfaction and work-to-family conflict (Allen *et al.*, 2000). It is reasoned to believe that work-to-home interference, as well as the level of satisfaction with the division of labour in the domestic sphere, has an impact on sexual desire. This may be of particular importance to women, who to a lesser extent than men have sex for the sake of recreation (Lewin *et al.*, 2000). The women may feel they are too tired or too stressed to have sex, and may feel that their situation is not understood by the partner. Reduced sexual desire in women has also been suggested to be caused by sleep deprivation during the period of caring for a baby (Diamond, 2003).

Only a few studies have focused on reduced sexual desire in couples (Heiman *et al.*, 1986; Ridley *et al.*, 2006). Most commonly, individuals, not couples, are asked to participate in sex surveys. The present study contributes to the expansion of our knowledge about partnerships and cohabitation. More specifically, the purpose of this paper is to gain greater insight into the problem of reduced sexual desire in couples. How prevalent is reduced sexual desire in couples, and how is the pattern of reduced desire distributed within the couple? How do married and cohabiting men and women understand the causes of their problem? We also wanted to examine the relationship between socio-biological factors, individual factors, relational factors, contextual factors, and reduced sexual desire. Can these factors predict reduced sexual desire, and is reduced sexual desire influenced by the same factors as distressing loss of sexual desire in men and women?

Methods

Participants

The data presented in this study come from a sample of Norwegian married or cohabiting couples. Participants included 399 couples (798 individuals) between 22 and 67 years of age. Data collection was carried out in March and April 2006 by the means of self-administered postal questionnaires. Data were collected in two steps. Firstly, trained telephone interviewers from the poll organization Synovate MMI contacted the subjects. The interviewers contacted 3954 people within the target group, from which 1214 (607 couples) agreed to participate. This gives a “response rate” of 31%, which is acceptable considering the requirement that both partners in the couple had to agree to participate in the survey. Secondly, after the couple had agreed to participate, the questionnaires were sent in separate envelopes to each partner. Of the 1214 that had agreed to participate, 830 returned the questionnaires. This gives a completion rate of 68%. However, 32 of these responses were from only one of the partners within the couple. These 32 were excluded. Accordingly, the net sample consists of 789 individual responses or responses from 398 heterosexual couples and 1 homosexual couple. This gives a response rate of 66%. In this study, homosexual couples were excluded from the analysis.

Procedure

The landline phone sample was based on Synovate MMI’s central register of landline phones in Norway and chosen according to stratum, county and community type as criterion variables. Nearly all Norwegian households (about 97%) have a landline, or home phone. The sample was drawn randomly within each stratum. In addition, another sample was drawn based on mobile phone numbers. The recruitment via mobile phones was made to account for the systematic bias that would occur in the data if the sector of the population which only uses mobile phones was denied the opportunity to participate. A total of 80% were recruited via landline/home phones, and 20% via mobile phones.

The overall response rate, considering both steps, was just above 20% (798/3954). This is marginally lower than other Norwegian self-completion people studies performed in this manner. We believe this can be explained by the requirement that both partners in each couple had to agree to participate in the survey. Studies show that non-response in self-administered questionnaire studies performed in this manner is coincidental and does not normally yield particular biases in the net samples (MMI, 1985–2006). Through step one and two there was also a strict emphasis on anonymity.

The sample

The mean age of the men was 46.2 years (23–67 years), and of the women 44.0 years (22–66 years). Eleven percent of the sample reported having 9 years or less education. Thirty-seven percent of the men and 42% of the women reported having finished high school, 32% of the men and 26% reported 1–4 years of university

studies, and 20% of the men and 22% of the women reported more than 4 years of university studies. Compared to figures from Statistics Norway (2006), the percentage of respondents with higher education is somewhat over-represented in this study. The men reported a higher gross income than women. Six percent of the men and 25% of the women claimed their income was less than NOK 200.000, 51% of the men and 63% of the women reported between NOK 200.000 and 400.000, 37% of the men and 11% of the women NOK 400.000–700.000, and 7% of the men and 2% of the women reported NOK 700.000 or more. Comparing these self-reported figures with tax return accounts among persons 17–74 years from Statistics Norway (2004), persons with low income are somewhat underrepresented in the sample.

Selected variables previously used in the Norwegian Sexual Behaviour Survey 2002 (Træen *et al.*, 2003) were made available for comparison with the present study.

Limiting the comparison to married or cohabiting persons younger than 50 years of age, the percentage of respondents who had experienced extradyadic activity was fairly equal between the samples (see Table I). The respondents' mean age was higher in the couple study than in the sexual behaviour study, but the level of education was higher in the sexual behaviour study than in the couple study. Furthermore, the coital frequency for the past 30 days was higher in the sexual behaviour study than in the couple study. The differences between the two samples are, however, not dramatic.

The questionnaire

The questionnaire included 47 questions related to social background, communication with the partner, sexual behaviour, the relationship to one's partner and living together. Fifteen of the 47 questions contained sub-questions. Some questions were

TABLE I. Comparison of level of education, coital frequency, and experience of extradyadic activity in the MMI couple study and the Norwegian Sexual Behaviour Survey 2002.

	Men		Women	
	MMI	Sex survey	MMI	Sex survey
Level of education (mean) ^a	2.7	3.0***	2.7	3.0***
	<i>n</i> = 235	<i>n</i> = 888	<i>n</i> = 272	<i>n</i> = 1370
Mean age	39.0	36.7***	38.7	34.9***
	<i>n</i> = 235	<i>n</i> = 889	<i>n</i> = 273	<i>n</i> = 1381
Mean coital frequency	5.6	5.2***	5.7	5.2***
	<i>n</i> = 234	<i>n</i> = 854	<i>n</i> = 273	<i>n</i> = 1344
Extradyadic experience ^b	12.6	16.4	10.1	10.9
	<i>n</i> = 231	<i>n</i> = 850	<i>n</i> = 268	<i>n</i> = 1346

Note: ****p* < 0.001.

^aQuestion: How many years of education have you completed?, with the response categories 1 = 9 years or less, 2 = 10 to 12 years, 3 = 13 to 14 years, and 4 = 15 years or more.

^bQuestion: How often have you and your spouse/partner had sexual intercourse during the past 30 days?, with response categories 1 = Several times per day, 2 = daily, 3 = 5–6 times per week, 4 = 3–4 times per week, 5 = 1–2 times per week, 6 = once every 14 days, 7 = rarely, and 8 = not at all.

developed specifically for this study, for example questions about partnership communication on sexual issues and causes of reduced sexual desire. However, the majority of the questions and scales have been used in previous studies. The questions related to loss of sexual desire were adapted from the Swedish Sexual Behaviour Survey (Lewin *et al.*, 2000; Öberg, 2005); questions on sexual behaviour were adapted from the Norwegian Sexual Behaviour Surveys (Træen *et al.*, 2003), and questions on the frequency of various sexual experiences from an MMI survey in 1997. In addition, the questionnaire contained a scale of negative thinking habits (Verplanken *et al.*, 2005), assessments of negative work-to-home interference (Geurts *et al.*, 2005), and satisfaction with the division of domestic labour (Østlyngen *et al.*, 2003).

Measurements

Reduced sexual desire. This variable was measured by means of the following questions: 'It sometimes happens that people have periods of reduced interest in sex. How often has this occurred in your sex-life during the past 12 months?' The level of personal distress associated with reduced sexual desire was reported in response to the question: 'It sometimes happens that people have periods of reduced interest in sex. How often has this been a problem in your sex-life during the past 12 months?' The response alternatives for both categories (reduced sexual desire and distressing reduced sexual desire) were 6 = all the time, 5 = nearly all the time, 4 = quite often, 3 = hardly ever, 2 = quite rarely, and 1 = never. The classification of the degree of reduced sexual desire and distress into *manifest* (all the time, nearly all the time and quite often), *mild* (hardly ever, and quite rarely) and *no* was adopted from Öberg *et al.*, 2004). A new variable on sexual desire within couples was constructed by combining the responses from each individual partner.

Habitual negative perception about oneself (Verplanken, 2006), and one's partner. This variable was measured using the following heading and six sub-questions: 'Thinking negatively about myself (my partner) is something... 1) I do frequently, 2)... I do automatically, 3)... that feels sort of natural to me, 4)... I do without further thinking, 5)... I start doing before I realise I'm doing it, and 6)... that's typically "me"'. Respondents evaluated each of the six statements on a scale of 1 to 5, where 1 = agree completely and 5 = disagree completely. Each item was reversed, summed and calculated as a mean score for all the items. Cronbach's alpha was 0.94 for both men and women on the scale of habitualised negative perception about oneself. Cronbach's alpha was 0.93 for men and 0.92 for women on the scale of habitualised negative perception about the partner.

Sexual experience was measured by the question: 'How often do you experience the following types of sex or sexual activity?' The subjects were also asked whether they had experienced the following: 'problems becoming sexually aroused or motivated, conflicts over sex with your partner, rejecting your partner when he/she wants to have sex, rejection when you want sex, thoughts of others when you have sex/intercourse with your partner, orgasm during sex/intercourse, partner orgasm during

sex/intercourse, simultaneous orgasm with your partner, faked orgasm on your part, and talking to your partner about sexual issues'. The response categories were 1 = never, 2 = seldom, 3 = sometimes, and 4 = often/always.

Negative work-to-home interference was measured by five questions translated into Norwegian from the English version of SWING (Geurts *et al.*, 2005). The participants were asked to indicate how often work interfered with their private life. The questions were 'How often does it happen that (a) you are irritable at home because your work is demanding?; (b) you do not fully enjoy the company of your spouse/family/friends because you worry about your work?; (c) you find it difficult to fulfil your domestic obligations because you are constantly thinking about work?; (d) you lack the energy to engage in leisure activities with your spouse/family/friends because of your job?; (e) your work obligations make it difficult for you to feel relaxed at home?'. The response categories were 1 = never, 2 = sometimes, 3 = often, and 4 = always. The mean score of the five items was used in the analyses. Cronbach's alpha was 0.80 for men and 0.84 for women.

Domestic labour satisfaction was measured by the responses to the following questions: 'How satisfied are you with . . . the overall division of labour in your household?', and . . . 'the way your family carries out domestic work?' The response categories ranged from 1 = not satisfied, to 7 = very satisfied.

Communication about sexual issues. The participants reported communication about sexual issues with their partner in their responses to eight statements concerning the frequency of communication ('As regards your sexual life, how often do you talk to your partner about . . .'), and eight related evaluations of how important it was for the person to talk about these issues ('How important is it for you to talk to your partner about . . .'). The items regarding frequency were evaluated on a scale from 1 = never, to 7 = always, and the items regarding importance from 1 = not important, to 7 = very important. The variables concerning communication about sexual issues were calculated as the product of frequency and importance.

Statistical analysis

All statistical analyses were performed using SPSS/PC version 13. In order to predict reduced sexual desire, a number of hierarchical linear regression analyses were performed.

Results

Table II shows the prevalence of manifest and mild reduced sexual desire and distressing reduced sexual desire during the past 12 months in men and women. Of the males, 24% reported manifest reduced sexual desire, and 16% claimed they had felt manifest distressed reduced sexual desire. The corresponding figures for women were 53% and 34%.

As this sample consists of couples, an overview of how reduced sexual desire is placed within the couple can be made.

The results showed a majority (59%) of the couples reported mild or no distressing reduced sexual desire during the past 12 months; in 8% of the couples both partners reported distressing reduced sexual desire, in 26% of the couples only the female partner reported the problem, and in 8% of the couples the male partner reported distressing reduced sexual desire (Table III). The figures for overall experience of reduced sexual desire, but not necessarily distressing reduced sexual desire, were 43%, 18%, 34%, and 5%, respectively. The lower percentage for the latter category, in which only the male partner reported to have had the experience, is most likely explained by variation in the number of participants responding to the questions. There was no statistically significant difference in the reporting of the couples' common experience of reduced sexual desire, the age gap between the female and the male partner, or with the male or the female's reported age.

In a relationship partners do not necessarily experience events in the same way, or do not necessarily believe the same things to be the causes of certain outcomes or events. As shown in Table IV, the most frequently reported reasons for having experienced distressing reduced sexual desire among men were: stress (38%), "other" (19%), "don't know" (18%), illness/disease (18%), poor communication in the relationship (17%), negative self-esteem (4%), and trauma after sexual abuse (0.3%). Among men more than five years older than their partner 31% reported

TABLE II. The prevalence of reduced sexual desire during the past 12 months among Norwegian heterosexual men and women forming parts of couples (percentage).

	Men		Women	
	Reduced sexual desire	Distressing reduced sexual desire	Reduced sexual desire	Distressing reduced sexual desire
Manifest	23.5	15.7	52.7	34.0
Mild	58.7	50.6	44.0	49.3
Never	17.7	33.7	3.3	16.7
	<i>n</i> = 395	<i>n</i> = 389	<i>n</i> = 389	<i>n</i> = 377

TABLE III. The prevalence of reduced sexual desire and distressing reduced sexual desire during the past 12 months in Norwegian heterosexual couples (percentage).

	Reduced sexual desire	Distressing reduced sexual desire
The couple has mild or no problems	42.6	58.8
Both have a manifest problem	18.3	8.1
She has a manifest problem	34.4	25.5
He has a manifest problem	4.7	7.6
	<i>n</i> = 387	<i>n</i> = 369

illness/disease to be the cause of the problem, compared to 10% in the group where the male partner was two to three years older. Stress was reported to be the cause by 50% of men 30 years or younger and by 30% of men aged between 50 and 67. There were no statistically significant differences in the reporting of the causes to reduced sexual desire among men as related to the age of the partner.

The most frequently reported causes of distressing reduced sexual desire among the women were stress (40%), "other" (30%), illness/diseases (24%), poor communication within the relationship (15%), poor self-esteem (12%), "don't know" (11%), and trauma after sexual abuse (2%) (Table V). "Poor self-esteem" was most frequently reported to be the cause in the group in which the male partner was more

TABLE IV. Causes of distressing reduced sexual desire during the past 12 months among Norwegian heterosexual men forming parts of couples (percentage).

The men's reported causes	Age group			
	23–29 years	30–39 years	40–49 years	50+ years
Stress	50.0	41.2	48.1	30.2*
Poor communication in the relationship	5.6	23.5	20.3	12.7
Diseases	11.1	16.2	13.9	21.4
Trauma after sexual offence	0	0	0	0.8
Negative self-esteem	5.6	2.9	7.6	2.4
Other	16.7	14.7	13.9	26.2
Don't know	22.2	17.6	17.7	18.3
	<i>n</i> = 18	<i>n</i> = 68	<i>n</i> = 79	<i>n</i> = 126

Note: Tested for statistical significant differences in the reporting between the age groups by means of Chi-square test. * $p < 0.05$.

TABLE V. Causes of distressing reduced sexual desire during the past 12 months among Norwegian heterosexual women forming parts of couples (percentage).

The women's reported causes	Age group			
	23–29 years	30–39 years	40–49 years	50+ years
Stress	33.3	45.1	41.9	34.3
Poor communication in the relationship	8.3	20.4	17.1	6.7*
Diseases	20.8	15.9	23.9	27.6
Trauma after sexual offence	4.2	0	3.4	0*
Negative self-esteem	12.5	21.2	11.1	3.8***
Other	33.3	32.7	28.2	26.7
Don't know	8.3	8.0	6.8	20.0**
	<i>n</i> = 24	<i>n</i> = 113	<i>n</i> = 117	<i>n</i> = 105

Note: Tested for statistical significant differences in the reporting between the age groups by means of Chi-square test. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

than six years his partner's senior (24%) and least frequently among women whose partner was the same age or one year older (6%). More women in the age between 30 and 49 years (20%) than those younger than 30 years (8%) or older than 50 years (7%) reported poor communication as the cause of the problem. Poor self-esteem was most frequently reported as the main cause of reduced sexual desire in women in the age group 30–39 years (21%) and least frequently in women in the age group 50+. On the other hand, the highest percentage of women reporting “don't know” was found among the women 50 years or older (20%). This, in addition to the high percentage of participants reporting “other” causes us to seek alternative explanations for reduced sexual desire.

In Table VI we focus on the bivariate relationships between reduced sexual desire and social background variables, frequency of sexual experiences, coital frequency, negative work-to-home interference and habitualised negative thinking about oneself and the partner. As regards general experience of reduced sexual desire during the past year, the three strongest correlations among both genders were coital frequency ($r_{\text{men}} = 0.48$; $r_{\text{women}} = 0.59$), arousal problems ($r_{\text{men}} = 0.39$; $r_{\text{women}} = 0.47$), and rejecting the partner's sexual initiatives ($r_{\text{men}} = 0.23$; $r_{\text{women}} = 0.36$). Regarding distressing loss of sexual desire, the strongest correlations were coital frequency ($r_{\text{men}} = 0.39$; $r_{\text{women}} = 0.43$), arousal problems ($r_{\text{men}} = 0.35$; $r_{\text{women}} = 0.42$), and conflicts with the partner over sexual issues ($r_{\text{men}} = 0.26$; $r_{\text{women}} = 0.36$). Reduced sexual activity is a likely consequence of lacking sexual motivation. It is difficult to make any conclusions about the relationship between cause and effect in this case. For this reason, coital frequency was excluded from the subsequent multivariate analyses.

Hierarchical regression analyses were carried out to study the relationship between reduced sexual desire and social background factors, habitualised thinking about oneself and the partner, communication about sexual issues, satisfaction with domestic labour and negative work-to-home interference, and the frequency with which men and women experience various sexual issues. The predictor variables were entered in blocks; first, social background factors; second, habitualised thinking about oneself and the partner; third, communication about sexual issues; fourth, satisfaction with domestic labour and negative work to home interference; and fifth, frequency of experiencing different sexual issues. In the subsequent analyses, non-parents (74 men and 61 women) and individuals not working or studying (39 men and 58 women) were excluded. The results for the female section are presented in Table VII.

Overall, social background variables explained a small percentage of the variance in reduced sexual desire among women. Habitualised negative thinking contributed significantly to the prediction of both variables for reduced sexual desire after controlling for social background, explaining an additional 9% of reduced sexual desire and 8% of distressing loss of desire. Communication with the partner about sexual issues (step 3) added significantly to the percentage of explained variance for both dependent variables. In step 4, the included predictors contributed to a statistically significant increase in the explained variance in distressing reduced sexual desire. In the fifth and final step of the analysis, variables regarding the frequency of

TABLE VI. The bivariate associations between a selected set of variables and experience of reduced sexual desire in Norwegian couples (Pearson's r).

	Reduced sexual desire		Distressing reduced sexual desire	
	Men	Women	Men	Women
Age	0.08 ($n = 390$)	-0.04 ($n = 386$)	0.11* ($n = 384$)	-0.06 ($n = 374$)
Number of children	-0.09 ($n = 313$)	-0.15** ($n = 320$)	-0.08 ($n = 307$)	-0.14* ($n = 310$)
Age of youngest child	0.06 ($n = 314$)	-0.16** ($n = 318$)	0.04 ($n = 308$)	-0.11 ($n = 308$)
Habitualised negative thinking about the partner	0.18** ($n = 394$)	0.20** ($n = 387$)	0.23** ($n = 388$)	0.11* ($n = 375$)
Habitualised negative thinking about oneself	0.05 ($n = 395$)	0.17** ($n = 387$)	0.14** ($n = 389$)	0.24** ($n = 375$)
Negative work to home interference	0.17** ($n = 355$)	0.18** ($n = 336$)	0.15** ($n = 350$)	0.27** ($n = 324$)
Satisfaction with division of labour at home	-0.16** ($n = 395$)	-0.06 ($n = 389$)	-0.16** ($n = 389$)	-0.15** ($n = 377$)
Satisfaction with how the family does house work	-0.17** ($n = 395$)	-0.14** ($n = 387$)	-0.16** ($n = 389$)	-0.19** ($n = 375$)
Coital frequency	0.48** ($n = 395$)	0.59** ($n = 389$)	0.39** ($n = 389$)	0.43** ($n = 377$)
How often do you experience				
Problems becoming sexually aroused	0.39** ($n = 390$)	0.47** ($n = 379$)	0.35** ($n = 384$)	0.42** ($n = 370$)
Conflicts over sex with your partner	0.15** ($n = 390$)	0.34** ($n = 379$)	0.26** ($n = 384$)	0.36** ($n = 368$)
Rejecting partner when he/she wants to have sex	0.23** ($n = 390$)	0.36** ($n = 380$)	0.24** ($n = 384$)	0.31** ($n = 368$)
Rejection when you want sex	0.14** ($n = 394$)	0.04 ($n = 378$)	0.12* ($n = 388$)	0.07 ($n = 367$)
Thoughts of others when having sex with partner	0.14** ($n = 388$)	0.14** ($n = 381$)	0.19** ($n = 382$)	0.15** ($n = 370$)
Orgasm during sex	-0.13* ($n = 385$)	-0.19** ($n = 376$)	-0.13* ($n = 379$)	-0.15** ($n = 365$)
Partner orgasm during sex	-0.13* ($n = 386$)	-0.03 ($n = 371$)	-0.05 ($n = 380$)	0.03 ($n = 359$)
Simultaneous orgasm with your partner	-0.14** ($n = 389$)	-0.24** ($n = 374$)	-0.05 ($n = 383$)	-0.16** ($n = 364$)
Faked orgasm on your part	0.06 ($n = 388$)	0.04 ($n = 374$)	0.09 ($n = 382$)	0.02 ($n = 362$)

Note: * $p < 0.05$; ** $p < 0.01$.

experiencing various sexual acts were included. Summarised, the included predictors explained 43% of the variance in reduced sexual desire and 40% of the variance in distressing loss of sexual desire.

TABLE VII. Hierarchical multiple regression analysis for predicting reduced sexual desire during the past 12 months among women with children who study or work.

Variables	Reduced sexual desire (<i>n</i> = 249)			Distressing reduced sexual desire (<i>n</i> = 243)		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		0.04	0.04**		0.02	0.02
Age	-0.05			-0.01		
Age of youngest child	-0.14			-0.09		
Step 2		0.12	0.09***		0.10	0.08***
Habitual thinking, partner	0.14*			-0.06		
Habitual thinking, self	0.03			0.16**		
Step 3		0.19	0.07***		0.13	0.03*
Talking about what is good for me	-0.09			-0.05		
Talking about sexual fantasies	-0.08			0.02		
Step 4		0.21	0.02		0.21	0.08***
Negative work to home interference	0.06			0.19***		
Satisfaction with division of labour at home	0.09			0.12		
Satisfaction with how the family does house work	-0.02			-0.14		
Step 5		0.43	0.23***		0.40	0.18***
Problems with sexual arousal	0.38***			0.28***		
Conflicts with partner over sex	0.24***			0.28***		
Partner rejects sexual initiatives	0.03			0.00		
Having orgasm during sex	-0.02			-0.05		

Note: All coefficients were taken from the last step of the equation.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

For men, the social background variables did not explain any variance in reduced sexual desire (Table VIII). Habitualised negative thinking contributed significantly to the prediction of both variables for reduced sexual desire after controlling for social background. Communication with the partner about sexual issues added significantly to the percentage of explained variance for general loss of desire. In step 4, the job-home satisfaction predictors contributed to a statistically significant increase in the explained variance in both variables for reduced sexual desire. The variables for the frequency of experiencing various sexual acts included in the final step explained an additional 8% of the variance in reduced sexual desire and 9% of the variance in distressing loss of sexual desire.

Discussion

This study has shown that reduced sexual desire in Norwegian married or cohabiting couples is a relatively frequently reported phenomenon. Among couples reporting distressing reduced sexual desire it was most often the female partner who had

TABLE VIII. Hierarchical multiple regression analysis for predicting reduced sexual desire during the past 12 months among men with children who study or work.

Variables	Reduced sexual desire (<i>n</i> = 262)			Distressing reduced sexual desire (<i>n</i> = 257)		
	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		0.00	0.00		0.00	0.00
Age	-0.01			0.06		
Age of youngest child	0.01			-0.03		
Step 2		0.04	0.04**		0.04	0.04**
Habitual thinking, partner	0.17*			0.15*		
Habitual thinking, self	-0.14*			-0.08		
Step 3		0.08	0.04**		0.06	0.02
Talking about what is good for me	-0.20*			-0.06		
Talking about sexual fantasies	0.02			-0.06		
Step 4		0.12	0.04*		0.10	0.04*
Negative work to home interference	0.08			0.04		
Satisfaction with division of labour at home	-0.14			-0.14		
Satisfaction with how the family does house work	0.00			-0.03		
Step 5		0.20	0.08***		0.19	0.09***
Problems with sexual arousal	0.30***			0.22***		
Conflicts with partner over sex	-0.01			0.19**		
Partner rejects sexual initiatives	0.05			0.04		
Having orgasm during sex	0.01			0.04		

Note: All coefficients were taken from the last step of the equation.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

reported the experience. Most of the men and women who had sexual desire problems believed their loss of sexual desire was related to stress, disease or "other" factors. Reduced capacity for sexual arousal was the best predictor of loss of desire in both genders. Among women, negative work-to-home interference was related to loss of sexual desire. Contrary to what is commonly believed, neither the age of the partners nor the youngest child's age predicted reduced sexual desire. To the best of our knowledge the data from this study on reduced sexual desire in couples are unique. The majority of the couples did not have distressing problems related to loss of sexual desire. Even so, in one in four couples the female partner had distressing loss of sexual desire. In slightly less than one in ten couples, the male partner or both partners experienced a distressing loss of desire.

Reduced sexual desire was measured using the same questions as in the Swedish sexual behaviour study of 1996, which allows us to compare the findings directly (Lewin *et al.*, 2000). The prevalence of reduced sexual desire was higher in this study compared to that of the Swedish survey (Fugl-Meyer, 2000), particularly in males. A total of 17% of married or cohabiting Swedish men, and 33% of women reported to

have experienced reduced sexual desire during the past year, compared to, respectively, 23% and 53% in this study. Öberg and colleagues (2004) found a total of 89% of the female subjects had experienced mild (60%) or manifest (29%) loss of sexual desire during the past year, and 59% reported distressing loss of desire (44% mild and 15% manifest). The figures for distressing loss of sexual desire in our study were nearly double. One possible reason for this, besides simply reflecting a real difference in prevalence between the countries, may be related to the time gap of ten years between the two surveys. It is possible that the problem of reduced sexual desire has increased since then. However, this can hardly be the only explanation. Firstly, the difference in study design between the surveys may be of significance in this respect. Secondly, it is likely more difficult to recruit couples than single individuals for participation in surveys. Finally, the two studies were introduced differently to the subjects, and the questions in the questionnaires differed with regard to content. Comparing the coital frequency in married and cohabiting persons younger than 50 years of age in this study with the Norwegian Sexual Behaviour Study of 2002, individuals with reduced sexual desire may be somewhat over-represented in our study.

The most frequently self-reported causes of reduced sexual desire were stress, disease and "other" causes. The variables included in the prediction model point to each of these causes. However, the included predictors were better in explaining loss of sexual desire in women than in men. This indicates that, compared to women, men's loss of sexual desire may be more related to biological, individual psychological, relational or contextual factors not measured in this study. Furthermore, although some of these factors are interrelated, distressing reduced sexual desire and general experience of loss of sexual desire are not predicted by the same factors.

Individual psychological

The problem with sexual arousal was by far the best predictor of loss of desire among both men and women. On the background of how sexual arousal was measured in this study, it was interpreted as an individual psychological factor caused for instance by previous experience of sexual coercion, poor self-esteem, worrying, anxiousness of losing control over the body, depression, stress, or a perception of having the wrong partner. However, reduced sexual arousal may also be related to biological changes (hormonal disturbances, disease, side-effects of medication, menopause, etc.), relational factors (e.g. low level of intimacy with the partner) or contextual factors (Basson, 2005). In this context it is interesting that we found no significant relationship (controlled for the effect of other factors) between reduced sexual desire and age or between reduced sexual desire and the youngest child's age. The questionnaire did not include any information on the duration of the relationship. A common finding is that sexual activity is inversely proportional to the length of a relationship (Blumstein & Schwartz, 1983; Call *et al.*, 1995; Greenblat, 1983; James, 1983; Laumann *et al.*, 1994; Metts *et al.*, 1998; Udry, 1980). The frequency of verbal and non-verbal expressions of passion (Hatfield & Rapson, 1987) has also been

shown to be inversely proportional to the length of a relationship (Metts *et al.*, 1998). This is often interpreted as an indication of a reduced level of sexual desire, but sexual activity is not necessarily an expression of sexual desire (Regan & Berscheid, 1999). It remains to be explored which decreases with the length of a relationship: sexual desire or merely sexual activity.

Participants who reported loss of sexual desire also reported a higher level of habitualised negative thinking about their partner. Furthermore, men were found to have habitualised positive thoughts about themselves while simultaneously having negative thoughts about the partner. This could indicate a stronger desire to leave the partner in the men with reduced sexual desire than in the women. As could reasonably be expected, habitualised negative thinking about oneself predicted distressing reduced sexual desire in women. It could indicate these women blame themselves for not wanting sex with their partner, and may explain their distressing sexual problem with internal factors rather than external circumstances. By internalizing the cause of the problem, the female partner is also likely to feel shame and guilty for not being able to satisfy her partner, and suffers the image of herself as a socially and sexually incompetent person and partner.

Stress was found to be a common cause of reduced sexual desire in both genders, and may derive from several sources within both the domestic and the professional sphere. Satisfaction with the division of domestic labour, and how the rest of the family members carries out domestic work did not, however, predict reduced lust. This is contrary to Ridley *et al.*'s (2006) finding that the perception of equality of power between the spouses affected lust. Perhaps participants of our study did not associate satisfaction with the division of domestic labour with equality of power between the spouses. However, the effect of satisfaction probably disappeared when controlled for the influence of the other variables. On the other hand, the contextual factor negative work-to-home interference affected distressing reduced sexual desire in women, but not men. The total work load (including domestic and professional labour) could be higher for women than men, or women may strive harder in the professional sphere in order to reach perfection. Another explanation may be that men, to a greater extent than women, use sex as means of recreation and diversion from stress (Lewin *et al.*, 2000).

Frequency of conflicts with the partner over sex was a powerful predictor of both reduced sexual desire in women and distressing loss of desire in men. In consensus with Öberg *et al.* (2004), loss of sexual desire was related to reduced sexual activity. Within reason, this can be expected to lead to a higher frequency of conflicts with the partner over sex, provided the partner himself or herself does not also have reduced sexual desire.

In the group of participants experiencing reduced sexual desire, about one of five between 30 and 50 years of age blamed the loss of desire on poor communication in the relationship. In the multivariate analysis, poor communication about what was good for them in terms of sexual experiences or acts predicted general reduced sexual desire in men. Men may not communicate well with their partners about their desires because of a lack of motivation to have sex. On the other hand, the phrasing of the question constituting our dependent variable refers to a reduction of desire, which

implies sexual desire was higher at some previous point in time during the relationship. The partners may never have communicated what sexual experiences or acts are pleasurable for them, but this does not become a problem until an imbalance in sexual desire occurs.

A limitation to this study is that only one method was used to elucidate the research questions. This may cause a common methods variance. Future studies may include other methods for assessing the variables. Another limitation deals with the fact that only one question was used to assess distressing reduced sexual desire. On the other hand, our choice of using a single-item measuring reduced sexual desire, in consensus with Fugl-Meyer (2000) and Lauman *et al.* (1999), is based on the contention that pluri-items or indexes often are conceptually confusing mixing different aspects up. Furthermore, future research should expand the study to include homosexual couples, more young couples or for instance couples with special problems (e.g. couples where one or both have disabilities). Also, more insight into how the couple functions could have been obtained by use of qualitative methods.

In spite of these limitations, the prevalence of distressing reduced sexual desire in the married or cohabiting population of Norway is much higher than commonly believed. In fact, the magnitude of the problem qualifies denoting reduced sexual desire as an area of public health concern. The issues of distressing reduced sexual desire should be subject to further research in the future.

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References

- ALLEN, T.D., HERST, D.E.L., BRUCK, C.S. & SUTTON, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology*, 5, 278–308.
- BALDWIN, J.D. & BALDWIN, J.I. (1997). Gender differences in sexual interest. *Archives of Sexual Behavior*, 26, 181–210.
- BASSON, R. (2000). The female sexual response: A different model. *Journal of Sex & Marital Therapy*, 26, 51–65.
- BASSON, R. (2002). Are our definitions of women's desire, arousal and sexual pain disorders too broad and of orgasmic too narrow? *Journal of Sex & Marital Therapy*, 28, 289–300.
- BASSON, R., LEIBLUM, S., BROTTTO, L., DEROGATIS, L., FOURCROY, J., FUGL-MEYER, K., *et al.* (2003). Definitions of women's sexual dysfunction reconsidered: Advocating expansion and revision. *Journal of Psychosomatic Obstetrics and Gynecology*, 24, 221–229.
- BASSON, R., LEIBLUM, S., BROTTTO, L., DEROGATIS, L., FOURCROY, J., FUGL-MEYER, K., *et al.* (2004). Definitions of women's sexual dysfunction reconsidered: Advocating expansion and revision. *Journal of Sexual Medicine*, 1, 40–48.
- BASSON, R. (2005). Women's sexual dysfunction: revised and expanded definitions. *Canadian Medical Association Journal*, 19, 1327–1333.

- BECK, J.G., BOXMAN, A.W. & QUALTROUGH, T. (1991). The experience of sexual desire: Psychological correlates in a college sample. *Journal of Sex Research*, 28, 443–456.
- BLUMSTEIN, P. & SCHWARTZ, P. (1983). *American couples*. New York: Springer.
- CALL, V., SPRECHER, S. & SCHWARTZ, P. (1995). The incidence and frequency of marital sex in a national sample. *Journal of Marriage and the Family*, 57, 639–652.
- CARROL, J.L., VOLK, K.D. & HYDE, J.S. (1985). Differences between males and females in motives for engaging in sexual intercourse. *Archives of Sexual Behavior*, 14, 131–139.
- DIAMOND, L.M. (2003). What does sexual orientation orient? A bio-behavioral model distinguishing romantic love and sexual desire. *Psychological Review*, 111, 173–192.
- FUGL-MEYER, K. (2000). Sexuell förmåga och sexuella problem. In B. LEWIN (Ed.), *Sex in Sweden. On the Swedish sexual life*. Stockholm: The National Institute of Public Health.
- GEURTS, S.A.E., KOMPIER, M.A.J., ROXBURGH, S. & HOUTMAN, I.L.D. (2003). Does work-home interference mediate the relationship between workload and well-being? *Journal of Vocational Behavior*, 63, 532–559.
- GEURTS, S., RUTTE, C. & PEETERS, M. (1999). Antecedents and consequences of work-home interference among medical residents. *Social Science and Medicine*, 48, 1135–1148.
- GEURTS, S.A.E., TARIS, T.W., KOMPIER, M.A.J., DIKKERS, J.S.E., VAN HOFF, M.L.M. & KINNUNEN, U.M. (2005). Work-home interaction from a psychological perspective: Development and validation of a new questionnaire, the SWING. *Work and Stress*, 19, 319–339.
- GREENBLAT, C.S. (1983). The salience of sexuality in the early years of marriage. *Journal of Marriage and the Family*, 45, 289–299.
- HAAGA, D.A., DYCK, M.J. & ERNST, D. (1991). Empirical status of cognitive theory of depression. *Psychological Bulletin*, 110, 215–236.
- HAMILTON, L., BERG, A.K., TRÆEN, B. & KVALEM, I.L. (2001). Self-reported frequency of feeling sexual desire among a representative sample of 18–49 year old men and women in Oslo, elucidated by epidemiological data. *Scandinavian Journal of Sexology*, 4, 25–42.
- HATFIELD, E. & RAPSON, R. (1987). Passionate love/sexual desire: Can the same paradigm explain both? *Archives of Sexual Behavior*, 16, 259–278.
- HAYES, R.D., BENNETT, C.M., FAIRLEY, C.K. & DENNERSTEIN, L. (2006). What can prevalence studies tell us about female sexual difficulty and dysfunction? *Journal of Sexual Medicine*, 3, 589–595.
- HEIMAN, J.R., GLADUE, B.A., ROBERTS, C.W. & LOPICCOLO, J. (1986). Historical and current factors discriminating sexually functional from sexually dysfunctional married couples. *Journal of Marital Family Therapy*, 12, 163–174.
- HURLBERT, D.F. & APT, C. (1994a). Female sexual desire, response and behaviour. *Behavior Modification*, 18, 488–504.
- HURLBERT, D.F. & APT, C. (1994b). What constitutes sexual satisfaction? Directions for future research. *Journal of Sexual and Marital Therapy*, 9, 285–289.
- JAMES, W.H. (1983). Decline in coital rates with spouses' ages and duration of marriage. *Journal of Biosciences*, 15, 83–87.
- LAUMANN, E.O., GAGNON, J.H., MICHAEL, R.T. & MICHAELS, S. (1994). *The social organization of sexuality: Sexual practices in the United States*. Chicago: University of Chicago Press.
- LAUMANN, E.O., PAIK, A. & ROSEN, R.C. (1999). Sexual dysfunction in the United States. Prevalence and predictors. *Journal of the American Medical Association*, 281, 537–544.
- LEIBLUM, S.R. & ROSEN, R.C. (1988). Introduction: Changing perspectives on sexual desire. In S.R. LEIBLUM & R.C. ROSEN (Eds.), *Sexual desire disorders*. New York: Guilford.
- LEWIN, B. (Ed.), FUGL-MEYER, K., HELMIUS, G., LALOS, A. & MÅNSSON, S.A. (2000). *Sex in Sweden. On the Swedish sexual life*. Stockholm: The National Institute of Public Health.
- LOPICCOLO, J. & FRIEDMAN, J.M. (1988). Broad-spectrum treatment of low sexual desire: Integration of cognitive, behavioral and systemic therapy. In S.R. LEIBLUM & R.C. ROSEN (Eds.), *Sexual desire disorders*. New York: Guilford.
- LUNDBERG, U., MARDBERG, B. & FRANKENHAEUSER, M. (1994). The total workload of male and female white-collar workers as related to age, occupational level, and number of children. *Scandinavian Journal of Psychology*, 35, 315–327.
- MARSHALL, N.L. (1994). Combining Work and Family. In I.G.P. KEITA & J.J. HURRELL (Eds.), *Job stress in a changing workforce: Investigating gender, diversity, and family issues*. Washington, DC: American Psychological Association.
- MASTERS, W.H. & JOHNSON, V.E. (1966). *Human sexual response*. Boston: Little, Brown.

- MCCABE, M.P. (1994). Childhood, adolescent and current psychological factors associated with sexual dysfunction. *Journal of Sexual and Marital Therapy*, 9, 267–276.
- METTS, S., SPRECHER, S. & REGAN, P.C. (1998). Communication and sexual desire. In P.A. ANDERSEN & L.K. GUERRERO (Eds.), *Handbook of communication and emotion: Research, theory, applications, and contexts*. San Diego: Academic Press.
- MMI (1987). *Undersøkelse om seksualvaner November 1987* [A study on sexual behaviour November 1987]. Oslo: Market and Media Institute.
- MMI (1997). *Undersøkelse om seksualvaner Mai 1997* [A study on sexual behaviour May 1997]. Oslo: Market and Media Institute.
- MMI (1985–2006). *Norsk Monitor 1985–2006* [Studies on behaviour and attitudes in the Norwegian population, performed every election year since 1985]. Oslo: Market and Media Institute.
- OLIVER, M.B. & HYDE, J.S. (1993). Gender differences in sexuality: A meta-analysis. *Psychological Bulletin*, 114, 29–51.
- PEDERSEN, J.B. (1998). Sexuality and Aging. In I.H. NORDHUS, G.R. VANDENBOS, S. BERG & P. FROMHOLT (Eds.), *Clinical geropsychology*. Washington, DC: American Psychological Association.
- PERRY-JENKINS, M., REPETTI, R.L. & CROUTER, A.C. (2000). Work and family in the 1990s. *Journal of Marriage and the Family*, 62, 981–998.
- REGAN, P.C. & BERSCHIED, E. (1995). Gender differences in beliefs about the causes of male and female sexual desire. *Personal Relationships*, 2, 345–358.
- REGAN, P.C. (1998). Of lust and love: Beliefs about the role of sexual desire in romantic relationships. *Personal Relationships*, 5, 139–157.
- REGAN, P.C. & BERSCHIED, E. (1999). *Lust: What we know about human sexual desire*. California: Sage.
- REMPEL, J.K. & SERAFINI, T.E. (1995). Factors influencing the activities that people experience as sexually arousing: A theoretical model. *Canadian Journal of Human Sexuality*, 4, 3–14.
- RICHGELS, P.B. (1992). Hypoactive sexual desire in heterosexual women: A feminist analysis. *Women and Therapy*, 12, 123–135.
- RIDLEY, C.A., CATE, R.M., COLLINS, D.M., REESING, A.L., LUCERO, A.A., GILSON, M.S. & ALMEIDA, D.M. (2006). The ebb and flow of marital lust: A relational approach. *Journal of Sex Research*, 43, 144–153.
- Statistics Norway (2004). Size of gross income by sex. http://statbank.ssb.no//statistikkbanken/default_fr.asp?PLanguage=1
- Statistics Norway (2005). Level of education in the population. http://www.ssb.no/english/subjects/04/01/utniv_en/tab-2006-09-14-03-en.html
- Statistics Norway (2006). Labour force survey, Q2 2006 – Increase in number of employed. http://www.ssbno/english/subjects/06/01/aku_en/main.html
- TOLMAN, D.L. (1991). Adolescent girls, Women and sexuality: Discerning dilemmas of desire. *Women and Therapy*, 11, 55–69.
- TRÆEN, B. & SØRENSEN, D. (2000). Breaking the speed of the sound of loneliness; Sexual partner change and fear of intimacy. *Culture, Health and Sexuality*, 2, 287–301.
- TRÆEN, B., STIGUM, H. & MAGNUS, P. (2003). *Seksuallivet i Oslo 1997: Noen resultater fra Folkehelseundersøkelse av livsstil, seksualitet og helse i Oslo* [Sex-life in Oslo 1997. A report from The National Institute of Public Health's survey on life-style, sexuality and health in Oslo, Norwegian text]. Oslo: The National Institute of Public Health.
- UDRY, J.R. (1980). Changes in the frequency of marital intercourse from panel data. *Archives of Sexual Behavior*, 9, 319–325.
- VERBRUGGE, L.M. (1983). Multiple roles and physical health of woman and men. *Journal of Health and Social Behavior*, 24, 16–30.
- VERPLANKEN, B. (2006). Beyond frequency: habit as a mental construct. *British Journal of Social Psychology*, 45, 639–656.
- ÖBERG, K. (2005). *On conditions of Swedish women's sexual well-being. An epidemiological approach*. Thesis. Uppsala: University of Uppsala Press.
- ÖBERG, K., FUGL-MEYER, K.S. & FUGL-MEYER, A.R. (2002). On sexual well-being in sexually abused Swedish women: epidemiological aspects. *Sexual and Relationship Therapy*, 17, 329–341.
- ÖBERG, K., FUGL-MEYER, A.R. & FUGL-MEYER, K.S. (2004). On categorization and quantification of women's sexual dysfunctions: an epidemiological approach. *International Journal of Impotence Research*, 16, 261–269.

- ÖBERG, K. & FUGL-MEYER, K.S. (2005). On Swedish women's distressing sexual dysfunctions: some concomitant conditions and life satisfaction. *Journal of Sexual Medicine*, 2, 169–180.
- ØSTLYNGEN, A., STORJORD, T., STELLANDER, B. & MARTINUSSEN, M. (2003). En undersøkelse av total arbeidsbelastning og tilfredshet for psykologer i Norge [A survey of total workload and satisfaction among Norwegian psychologists]. *Tidsskrift for Norsk Psykologforening*, 40, 570–581.

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