

Predictors and correlates of sexual avoidance among partnered older adults among Norway, Denmark, Belgium, and Portugal

Carvalheira, Ana; Graham, Cynthia; Štulhofer, Aleksandar; Traen, Bente

Source / Izvornik: **European Journal of Ageing, 2019, -**

Journal article, Accepted version

Rad u časopisu, Završna verzija rukopisa prihvaćena za objavljivanje (postprint)

<https://doi.org/10.1007/s10433-019-00540-y>

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:131:087370>

Rights / Prava: [In copyright](#)

Download date / Datum preuzimanja: **2021-03-02**



Repository / Repozitorij:

[ODRAZ - open repository of the University of Zagreb](#)
[Faculty of Humanities and Social Sciences](#)



**Predictors and Correlates of Sexual Avoidance Among Partnered Older Adults among Norway,
Denmark, Belgium, and Portugal**

Commented [K1]: Published in Eur J of Ageing:
<https://link.springer.com/article/10.1007/s10433-019-00540-y>

Ana Alexandra Carvalheira¹, Cynthia Graham², Aleksandar Štulhofer³, and Bente Træen⁴

1 William James Center for Research, ISPA - Instituto
Universitário, Lisbon, Portugal

2 Department of Psychology, University of Southampton,
Southampton, England

3 Department of Sociology, University of Zagreb, Zagreb,
Croatia

4 Department of Psychology, University of Oslo, Oslo, Norway

Abstract

Research on sex in later life has been concerned with documenting that older people continue to have sex and establishing the links between good health and sexual activity. Although sexual avoidance is common in clinical and nonclinical populations of older adults, little attention has been given to the motives for sexual avoidance. To address gaps in the literature on sexual avoidance, the present study explored the self-reported reasons for, and correlates of, sexual avoidance in older partnered individuals with probability samples of 60–75-year-olds in four European countries (Norway, Denmark, Belgium, and Portugal). Results revealed significant differences between men and women in sexual avoidance, with women reporting more avoidance than men. The main reasons reported for avoiding sex were sexual difficulties, health problems, partner's sexual difficulties, and lack of sexual interest. Among men, significant predictors of sexual avoidance were age, relationship intimacy (the only relational predictor), physical health, and own and partner's sexual problems. In women, significant predictors of sexual avoidance were age, relationship duration, relationship satisfaction, relationship intimacy, physical and mental health, and own and partner's sexual problems. Thus, in men, health-related factors were more important predictors of sexual avoidance than relationship factors. In women, relationship factors were as important as health-related factors. These findings provide insight into an under-researched area. They also have important implications for healthcare and could inform the development of tailored sexual health interventions in older adults.

Keywords: Older adults; sexual avoidance; relationship intimacy; relationship satisfaction; sexual problems;

Predictors and Correlates of Sexual Avoidance Among Partnered Older Adults among Norway, Denmark, Belgium, and Portugal

Introduction

Few studies have investigated sexual avoidance. A recent nationally representative survey of British men and women aged 16 – 74 years (Mitchell et al. 2013) reported that sexual avoidance is increasingly common with age, being highest among those 65-74 years. This survey only assessed avoidance “because of sexual difficulties, either my own or those of my partner” (Mitchell et al. 2013: 1818). Though sexual avoidance is common in clinical and nonclinical populations of older adults, little attention has been given to the motives for sexual inactivity and avoidance. A possible reason for this is the positive framing of older people’s sexuality. The assessment of motives for sexual avoidance, particularly among older individuals, has been missing from the literature.

It is important to distinguish sexual avoidance from the more researched phenomenon of sexual inactivity. Sexual inactivity may reflect an individual’s wish to avoid sex but may also be due to other factors. Sexual avoidance implies an active decision to refrain from sexual activity i.e., a more active motivation to “keep away” from sexual activity. Also, sexual avoidance is not synonymous with inactivity, as many who avoid having sex are in fact having sex (duty sex) just to satisfy the partner and keep the relationship intact. There are no empirical data on what proportion of older age adults who are sexually inactive are actively avoiding sex. While there is a literature on sexual inactivity, very few studies determined whether reported inactivity is due to active avoidance. Thus, we review the literature on sexual inactivity first, followed by review of the few studies on sexual avoidance.

Sexual inactivity is more common with age (Lindau et al. 2007) and several studies have explored reasons for sexual inactivity. Some of these variables may also be predictive of sexual avoidance. Among the reasons for sexual inactivity, aging women often report partner-related factors, particularly the lack of a partner (Beckman, Waern, Gustafson, and Skoog, 2008; Lindau et al. 2007; Schick et al. 2010) while men tend to attribute their inactivity to personal, health-related reasons (Beckman et al. 2008; Schick et al. 2010). One study (Karraker and DeLamater 2013) analysed the correlates of sexual inactivity among 1,502 older married men and women aged 57 to 85 years living in the US. Longer marriages were more likely to be inactive, with each additional year of marriage associated with higher odds of sexual inactivity for both men and women. Higher levels of marital happiness and better physical health were associated with lower odds of sexual inactivity for both men and women (Karraker and DeLamater 2013). Furthermore, in both quantitative (Lindau et al. 2007) and qualitative studies, (Gott and Hinchliff 2003; Lodge and Umberson 2012) declining health is a primary reported reason for sexual activity cessation among older adults. Another motive for sexual inactivity in aging men and women is the existence of sexual difficulties and

dysfunctions. As discussed above, previous research indicates that sexual problems are frequent in older adults (Christensen et al. 2011; Laumann et al. 2005; Laumann, Das, and Waite 2008; Mitchell et al. 2013; Peixoto and Nobre 2015; Træen and Stigum 2010). The presence of sexual problems seems clearly associated with sexual inactivity, but the motives underlying sexual avoidance may be more complex and diverse.

There are good reasons to expect that the frequency of, and motives, for sexual avoidance may be quite different for men and women. Sexual scripts would suggest that men are the primary initiators of sex, and that women have a more passive role (Horvath and Brown 2010; Milhausen and Herold 1999). According to Gagnon and Simon (2005), through social processes, sexuality is given the expression and meaning which society and culture impose. In their sexual script theory, Gagnon and Simon argued that sexual behaviour is guided by culture- and group-specific sexual scripts. Sexual scripts are society's way of regulating sexual behaviour, among other things, by specifying when sexual interaction is accepted and when it is not. The traditional valid heterosexual sexual script most often contextualises sexual activity within a 'frame' of love and commitment (Gagnon and Simon, 2005), and sex for physical pleasure or other reasons is perceived as less acceptable (Wiederman, 2005). Traditional sexual scripts suggest that men should have a strong and constant interest in sexual activity (Masters, Casey, Wells, and Morrison 2012). This double standard pattern may be particularly evident among older adults. While the sexual double standard is becoming less pronounced (Milhausen and Herold 1999), patterns of sexual initiation among heterosexual couples are still male-dominated (Dworkin and O'Sullivan 2005). Thus, sexual avoidance among men would be expected to be less frequent because men feel some social pressure to initiate sexual activity. Thus, in the present study, we expected gender differences in the prevalence of sexual avoidance, with women more likely to avoid sex.

Recent qualitative studies have suggested some possible reasons for sexual avoidance. Qualitative data from in-depth interviews with 23 heterosexual women who experienced severe sexual problems revealed sexual avoidance was a strategy to deal with their problems (Hinchliff, Gott, and Wylie 2012). Avoiding intimate situations worked to prevent participants from directly saying no to their partners and thus to prevent them to feel rejected. Avoiding intimate situations also served to temper the frustration the women themselves felt at being unable to enjoy intercourse (Hinchliff et al. 2012). Another qualitative study, this one with men, explored the factors that inhibited men's sexual desire in a sample of 30 men

between the ages of 30 and 65 in long-term heterosexual relationships (Murray, Milhausen, Graham, and Kuczynski 2017). Findings revealed that many of the factors that were described as inhibitors of sexual desire suggested a lack of mutuality and intimacy. The main inhibitors of sexual desire were rejection, physical ailments and negative health characteristics, and lack of emotional connection with partner (Murray et al. 2017).

To address gaps in the literature on sexual avoidance, the present study explored the self-reported reasons for, and correlates of, sexual avoidance in older adults with probability samples of 60–75-year-olds in four European countries (Norway, Denmark, Belgium, and Portugal). Our aims were to assess the prevalence of sexual avoidance among partnered older men and women, to identify personal, relational and health-related factors associated with the phenomenon, and to document self-reported reasons for avoidance.

A strength of this study was the inclusion of both women and men, enabling gender comparisons of reasons for sexual avoidance. In addition to assessing both own and partner's sexual problems as a reason for sexual avoidance, a range of other reasons were explored, including body image concerns, relationship problems, worries about sexually transmitted infections (STIs), and physical health problems. To our knowledge this is the first study that has assessed these diverse reasons for avoiding sex.

Method

Participants

We conducted a cross-sectional multinational survey, with probability samples of the population aged 60-75 years, recruited by phone registers in Norway (n=1271), Denmark (n=1045), Belgium (n=990), and Portugal (n=509). The mean age of men was 66.7 years in Norway, 67.8 years in Denmark, 67.3 years in Belgium, and 66.6 years in Portugal. Among women, the mean age was 66.9 years in Norway, 67.8 years in Denmark, 66.4 years in Belgium, and 66.8 years in Portugal. The majority of men (83.1%) and women (68.1%) reported being in a steady, committed relationship. Only data collected from men and women who reported being in a steady committed relationship were used. Participant characteristics can be found in Table 1. The number of sexual minority respondents in the sample precluded separate analyses of this population.

Insert Table 1 about here

Recruitment and Procedure

From October 2016 to January 2017, the Department of Psychology at the University of BLINDED FOR REVIEW, in cooperation with the research company IPSOS, conducted the multinational survey in representative samples of the population aged 60-75 years in Norway, Denmark, Belgium, and Portugal. Initially, IPSOS conducted a recruitment interview in each country by telephone to obtain a nationally representative sample of the population 60-75 years. During this recruitment interview it was emphasized that the responses from those sexually inactive were as important as those from sexually active individuals.

The questionnaire was developed in English and subsequently translated into each country's native language by the principal investigators and IPSOS's staff in the four participating countries. Following this, randomized telephone recruitment of participants started. With the exception of Portugal, national phone registries (landline and mobile) were used so the sampling procedure would likely produce representative samples of the target population. In Portugal, a complete and updated telephone register does not exist. For this reason, IPSOS used a frequently used procedure for telephone surveys in Portugal when recruiting: 1) telephone numbers were first randomly selected from fixed phone directories and IPSOS's own database of phone numbers; 2) to obtain a distribution representative of the population, participants were selected by age and gender; and 3) due to literacy problems, participants who had not completed primary school were excluded from the sample.

Those who agreed to participate received a postal, anonymous, self-administered questionnaire, including a Freepost envelope to return the completed questionnaire. Two reminders were sent successively, starting one week after the questionnaire was received by the participant. Response rates were 68% in Norway, 52% in Denmark, 57% in Belgium and 26% in Portugal. A more detailed presentation of the sample, procedure, and the questionnaire is given elsewhere (Træen et al. 2018). The ethical procedures followed the standards of ESOMAR (The European Society for Opinion and Market Research), and national and international rules and guidelines for what is recognized as professionally sound market analysis were followed. The rules include guidance on confidentiality, respondent anonymity, questionnaires and databases and methods for data collection etc. No compensation for participation was given.

Measures

Reasons for and Frequency of Sexual Avoidance

Frequency of Sexual avoidance was measured by the following question: “How often have you avoided sex during the last year?” The question was phrased explicitly in a way that asked about active avoidance of sexual interaction. Also, the question was presented towards the end of the questionnaire and after questions about intercourse and masturbation activity were measured. This highlighted to the participants that it was not sexual inactivity that was measured – they have had the chance to report this earlier. Response categories were: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = always or almost always. This variable was dichotomized to be used as a dependent variable in two multivariate logistic regression analysis (0 = never or rarely avoidant; 1 = sometimes, often, always or almost always avoidant).

Reasons for avoiding sex were explored by asking: “If you have avoided sex: Why have you avoided having sex?” Multiple answers were permissible. The following response options were offered: relationship problems, worries about sexual transmitted infections (STIs), sexual difficulties, partner’s sexual difficulties, body image concerns, health problems, “I’m not interested in sex anymore”, and “other” reasons.

Sociodemographic Indicators

Level of education was assessed as the highest level of formal education. In three countries the response categories were 1 = Primary school (6-8 years at school), 2 = Lower secondary school (9-10 years at school), 3 = Higher secondary school, high school (12-13 years at school), 4 = College, lower university level (Bachelor degree level or similar), and 5 = Higher university level (Master degree, Ph.D. level or similar). In Belgium, additional response alternatives were added to mirror the educational system in the country. To allow for cross-cultural comparisons, the variable was recoded into 1 = primary (1), 2 = secondary (2+3), and 3 = tertiary education (4+5).

Place of residence was assessed by asking participants: “How would you describe the town or community where you live?” The response categories were 1 = rural, 2 = small town, 3 = medium-sized city, 4 = suburb of a large-sized city, 5 = large-sized city, and 6 = other.

Relationship status was assessed with the following question: “Do you currently have a steady/committed relationship with anybody? A steady/committed relationship also includes married/cohabiting persons.” Response categories were 1 = Yes, 2 = No, and 3 = Unsure. The 21 participants who were unsure about their relationship status were included in the “No” category.

Religiosity was assessed using a question about the frequency of attending religious ceremonies (“Apart from special occasions such as weddings, funerals, and baptisms, how

often do you attend religious services or meetings?”). Response options were: 1 = Once a week or more, 2 = Once every two weeks, 3 = Once a month, 4 = Twice a year, 5 = Once a year, 6 = Less than once a year, and 7 = Never. Based on its distribution, the variable was recoded into 1 = Never, 2 = Less than once a year, 3 = Once or twice a year, and 4 = Once a month or more.

Relational Indicators

Relationship duration was assessed as the number of years of the current committed relationship.

Relationship satisfaction was measured with the following indicator: “How happy or unhappy are you with your relationship with your partner, all things considered?” A 7-point scale, ranging from 1 = very happy to 7 = very unhappy, was used to anchor answers. Higher scores indicate lower levels of relationship satisfaction.

Relationship intimacy was measured using the 5-item Emotional Intimacy Scale (Sinclair and Dowdy 2006). In this study, Cronbach’s α for the scale was 0.91. Higher aggregate scores denote lower relationship intimacy.

Health-Related Indicators

Physical health and mental health: The Short Form Health Survey (SF12) was used to measure self-reported functional health and well-being (Ware, Kosinski, and Keller 1995). The SF12 includes 12 items and various response scales. Scores were summed using the official scoring schemes to provide overall scores on two sub-dimensions: mental health and physical health. Higher scores indicate better health and well-being.

Distressing sexual problems was measured by a modified version of the National Survey of Sexual Attitudes and Lifestyles (NATSAL-SF; Jones et al. 2015). For each of eight listed sexual difficulties, if experienced in a period of three or more months during the past year, the participant was asked about the level of associated distress (1 = no distress; 4 = severe distress). “In the last year, have you experienced any of the following for a period of 3 months or longer? (Mitchell et al. 2013). This was followed by eight different sexual problems: “lacked interest in having sex”, “lacked enjoyment in sex”, “felt anxious during sex”, “felt physical pain as a result of sex”, “felt no excitement or arousal during sex”, “did not reach a climax (experienced an orgasm) or took a long time to reach a climax despite feeling excited/aroused”, “reached a climax (experienced an orgasm) more quickly than you would like” and “Had trouble getting or keeping an erection”. Level of distress about one or more sexual difficulties was indicated by eight items which measured distress related to each particular type of sexual difficulty. The distress items, which used a 4-point scale ranging

from 1 = no distress to 4 = severe distress to anchor answers, were summed into a composite indicator (Cronbach's alpha was .98 for male and .99 for female participants). Higher composite scores denote higher distress about sexual problems; individuals who did not report a specific sexual difficulty were coded 0.

Partner's sexual problem(s) was measured by the following single item: "My partner has experienced sexual difficulties in the last year". Response categories ranged from 1 = strongly agree to 5 = strongly disagree.

Statistical Analyses

Gender differences and cross-country differences in the frequency of sexual avoidance and reasons to avoid sex were tested using the chi-square test. To assess the predictors/correlates of sexual avoidance a sequential multivariate logistic regression analysis was carried out separately for men and women. In the first step, the model (Model A) included only sociodemographic indicators. Relational indicators were entered in the second step (Model B) and health-related indicators in the final step (Model C). All analyses were carried out using IBM SPSS v22 statistical software package.

Results

Frequency of Sexual Avoidance

In this sample of partnered older individuals, 59% of men and 33% of women reported that they had not avoided sex in the past 12 months. Sixteen percent of women and 11% of men reported often, always or almost always avoiding sex (Table 2). There were significant differences between men and women in sexual avoidance ($\chi^2(4) = 222.86, p < .001$), with women reporting more avoidance than men. We observed no significant differences in sexual avoidance across countries either among men ($\chi^2(12) = 13.15, p > 0.05$) or women ($\chi^2(12) = 16.63, p > 0.05$).

Insert Table 2 about here

Reasons for Avoiding Sex

A diversity of reasons for avoiding sex were reported by participants. The main reasons reported by men were: (1) sexual difficulties (23%), significantly higher in Portugal and Denmark than in Belgium and Portugal ($\chi^2(3) = 19.06, p < .001$); (2) health problems (22%), significantly higher in Portugal and Belgium than in Norway and Denmark ($\chi^2(3) = 16.81, p < .01$); and (3) partner's sexual difficulties (19%). Among women, the most frequent reasons cited were: (1) health problems (23%); (2) partner's sexual difficulties (20%); and (3)

lack of sexual interest (14%), the latter significantly higher in Belgium and Denmark than in Norway and Portugal ($\chi^2(3) = 32.14, p < .001$). A relatively high proportion of men (24%) and women (31%) reported “other reasons”.

There were significant gender differences between men and women in the reasons for sexual avoidance: men were more likely than women to report sexual difficulties ($\chi^2(1) = 64.31, p < .001$); women were more likely than men to report body image concerns ($\chi^2(1) = 9.08, p < .01$); and women were more likely to cite lack of sexual interest ($\chi^2(1) = 23.75, p < .001$).

Insert Table 3 about here

Correlates/Predictors of Sexual Avoidance in Partnered Men

A multivariate logistic regression analysis was carried out among partnered men to assess the correlates of sexual avoidance (Table 4). In Model A, older men were more likely to report sexual avoidance than younger men. In Model B, older men and women who reported lower levels of relationship satisfaction were more likely to report sexual avoidance than younger men and women who reported higher levels of relationship satisfaction. In Model C, older men had greater odds of reporting more sexual avoidance (OR = 1.04, $p < .05$) than younger men. Men who reported lower levels of relationship intimacy had greater odds of reporting sexual avoidance (OR = 1.34, $p < .05$) than men who scored higher on relationship intimacy. Men who reported poorer physical health had greater odds of reporting sexual avoidance (OR = .97, $p < .01$) than men who reported better physical health. Men who reported distressing sexual problems had greater odds of reporting sexual avoidance (OR = 1.11, $p < .001$) than men who reported no such difficulties. Moreover, men who reported that their partners had sexual problems had greater odds of reporting sexual avoidance (OR = .76, $p < .001$) than men who reported no such sexual problems experienced by their partner. The results of the Hosmer–Lemeshow test were not significant, thus pointing to an acceptable fit of the regression models.

Insert Table 4 about here

Correlates/Predictors of Sexual Avoidance in Partnered Women

A multivariate logistic regression analysis was carried out among partnered women to assess the correlates of sexual avoidance. In Model A, younger women were more likely to report sexual avoidance than older women. In Model B, younger women and women in longer-term relationships were more likely to report sexual avoidance than older women, and women in shorter-term relationships. Additionally, women who reported lower levels of relationship satisfaction and relationship intimacy were more likely to report sexual avoidance than women who reported higher levels of relationship satisfaction and intimacy.

In Model C, younger women had greater odds of reporting sexual avoidance (OR = .93, $p < .01$) than older women. Women in longer-term relationships had greater odds of reporting sexual avoidance (OR = 1.01, $p < .01$) than women in shorter-term relationships. Women who reported lower levels of relationship satisfaction had greater odds of reporting sexual avoidance (OR = 1.18, $p < .05$) than women who reported lower levels of relationship satisfaction. Women who reported lower levels of relationship intimacy had greater odds of reporting sexual avoidance (OR = 1.52, $p < .01$) than women who reported lower levels of relationship intimacy. Women who reported poorer physical and mental health had greater odds of reporting sexual avoidance (OR = .98, $p < .05$ and OR = .96, $p < .001$, respectively) than women who reported better physical and mental health. Finally, women who reported distressing sexual problems and sexual problems in their partner had greater odds of reporting sexual avoidance (OR = 1.10, $p < .001$ and OR = .86, $p < .01$, respectively) than women who reported no such problems. The results of the Hosmer–Lemeshow test were not significant, thus pointing to an acceptable fit of the regression models.

Insert Table 5 about here

Discussion

In this cross-cultural study we estimated the prevalence and the reasons for, as well as the correlates of, sexual avoidance among older men and women who were in steady committed relationships. Findings revealed significant differences between men and women regarding sexual avoidance. As expected, women were more likely than men to report having avoided sex in the past 12 months (40% vs 19%). This is consistent with the findings of the Natsal-3 survey of British men and women aged 16 – 74 years (Mitchell et al. 2013) that revealed that sexual avoidance becomes more common with age, being highest among those 65-74 years. This finding that men avoid sex much less than women may reflect traditional sexual scripts, which posit that men should demonstrate a strong and unwavering interest in

sexual activity (Courtenay 2000; Masters et al. 2012) and be the one to initiate sex (Dworkin and O'Sullivan 2005; Baumeister, Catanese, and Vohs 2001). Men likely have less "opportunity" for sexual avoidance because they feel the imperative to behave sexually and to respond to their partner's sexual initiative.

A range of reasons for avoiding sex were reported by participants. Both men and women endorsed sexual difficulties, health problems, partner's sexual difficulties, and lack of sexual interest as reasons they avoided sex. These findings are similar to those found in previous studies (Lindau et al. 2007; Gott and Hinchliff 2003; Lodge and Umberson 2012; Mitchell et al. 2013). Regarding the reasons for sexual avoidance, there were gender differences in relation to lack of sexual interest, body image concerns (both more frequent reasons for avoidance among women), and sexual difficulties (more frequent among men).

A notable finding was that close to one-third of respondents (24% and 31% of men and women, respectively) chose the "other" category as a reason of sexual avoidance. There may be diverse "other" reasons for sexual avoidance. One of them may be partners' physical or mental health problems, which we did not assess. Another reason may be related to a lack of quality of sexual stimulation received from the partner across a relatively long relationship. This might be associated with a lifelong difficulty in communication with one's partner about preferred methods of sexual stimulation. Lack of or difficult communication with one's partner may be a reason to avoid sexual activity and the inability to share the real motives and what the individual is not getting from the partner. A recent study revealed that lack of sexual communication was the strongest predictor of lack of desire problems in both men and women (Graham et al. 2017). Another reason may be related to extra-marital activities of the partner who is avoiding sexual activity.

The multivariate regression analyses on the correlates of sexual avoidance also revealed some gender differences and similarities. Among men, the significant predictors of sexual avoidance were age, relationship intimacy (the only relational indicator), physical health, and own and partner's sexual problems. In women, the significant predictors of sexual avoidance were age, relationship duration, relationship satisfaction, relationship intimacy, physical and mental health, and own and partner's sexual problems. Thus, in men, health related factors appear more important than relationship factors. In women, relationship factors seem as important as health-related factors. The findings of the current study revealed similar predictors of sexual inactivity to those found in previous studies (Lindau et al. 2007; Beckman et al. 2008; Schick et al. 2010; Karraker and DeLamater 2013; Gott and Hinchliff 2003; Lodge and Umberson 2012).

Older men are more likely to avoid sex because of health-related problems that increase with age; in contrast, younger women are more likely to avoid sex. This might be due to relational factors or to other aspects related to the acceptance of the ageing process.

Our findings revealed that women (but not men) in longer-term relationships are more likely to avoid sex than women in shorter-relationships, which is consistent with previous literature that showed a decline of sexual frequency with increasing marital duration (Karraker and DeLamater 2013). In many couples, the novelty of sexual experience declines as marital duration increases, resulting in lower sexual frequency (Blumstein and Schwartz 1983; DeLamater and Sill 2005). Previous studies have revealed that women's sexual desire decreases as relationship duration increases (Carvalheira, Brotto, and Leal 2010; Klusmann 2002; Murray and Milhausen 2012). A study that analysed the correlates of sexual inactivity among 1,502 older married men and women aged 57 to 85 years showed that individuals in marriages of longer duration were more likely to be inactive (Karraker and DeLamater 2013).

Physical health was a significant predictor of sexual avoidance in men and women but mental health was a significant predictor only among women. This finding is consistent with previous literature that documented an association between health condition and sexual problems (DeLamater 2012; Field et al. 2013; Moreira et al. 2008; Træen et al. 2017).

Individual distressing sexual problems and partners' sexual problems were significant predictors of sexual avoidance among both men and women. These findings are not surprising, as sexual problems are frequent in older adults (Christensen et al. 2011; Laumann et al. 2005; Laumann, Das, and Waite 2008; Mitchell et al. 2013; Peixoto and Nobre 2015; Træen and Stigum 2010). Sexual problems were also found to be significant predictors of sexual avoidance in previous studies (Mitchell et al. 2013).

Strengths, limitations, and future research

Strengths of this study include the large sample size, the inclusion of participants from four European countries, the assessment of several reasons for sexual avoidance, the assessment of distress associated with sexual problems, and the similar research design and method of data collection across the four countries, that enabled between-country comparisons. Another strength was the inclusion of both women and men, enabling gender comparisons of reasons for sexual avoidance. Nevertheless, some limitations should also be acknowledged. Regarding the reasons for sexual avoidance, findings revealed a high number of participants who reported "Other" reasons but we did not ask participants to specify those reasons. Moreover, although we assessed individual respondents' physical health problems as a possible reason for sexual avoidance, we did not assess partners' health problems.

Qualitative research is needed both to better understand the motivations for avoiding sex and the consequences/outcomes of sexual avoidance. For example, long-term sexual avoidance by one partner may lead to resentment, and further sexual difficulties. Moreover, we know from clinical practice that mainly women, but also men, use a variety of strategies as avoidance behaviors related with sexual activity (e.g., go to bed earlier than the other partner). However, we don't have empirical evidence of these clinical observations.

Overall, a great deal of recent research on sex in later life has been concerned with documenting that older people continue to have sex, and establishing the links between good health, relationship well-being and sexual activity (Fileborn et al. 2015a; Fileborn et al.2015b; Gott and Hinchliff 2003; Gott, Hinchliff, and Galena 2004; Jagus and Benbow 2002; Kleinplatz et al. 2013; Lindau and Gavrilova 2010; Minichiello, Plummer, and Loxton 2004; Syme 2014; Watson, Stelle, and Bele 2017). It should, however, not be assumed that sexual activity will be the preferred choice for all older individuals. It's important to acknowledge that sexual avoidance may be in some situations be an adaptive response; avoidance does not have to be a negative or maladaptive behaviour. Understanding the reasons for sexual avoidance may help health professionals to be better able to respect the patient's life narrative and his/her choice to not be sexually active.

References

- Baumeister RF, Catanese KR, Vohs KD (2001) Is there a gender difference in strength of sex drive? Theoretical views conceptual distinctions and a review of relevant evidence. *Pers Soc Psychol Rev* 5(3):242–273
- Beckman N, Waern M, Gustafson D, Skoog I (2008) Secular trends in self reported sexual activity and satisfaction in Swedish 70 year olds: Cross sectional survey of four populations, 1971–2001. *BMJ* 337:a279
- Blumstein P, Schwartz P (1983) *American couples*. New York: Morrow
- Bouman WP, Arcelus J, Benbow SM (2006) Nottingham study of sexuality ageing (NoSSA I) Attitudes regarding sexuality and older people: A review of the literature. *Sex Relation Ther* 21(2):149-161. doi:10 1080/14681990600618879
- Carvalho A, Brotto L, Leal I (2010) Women's motivations for sex: Exploring the DSM-IV-TR criteria for hypoactive sexual desire and female sexual arousal disorders. *J Sex Med* 7(4):1454-1463. doi: 10 1111/j 1743-6109 2009 01693
- Christensen BS, Grønbaek M, Osler M, Pedersen BV, Graugaard C, Frisch M (2011) Sexual dysfunctions and difficulties in Denmark: Prevalence and associated sociodemographic factors. *Arch Sex Behav* 40:121–132
- Courtenay WH (2000) Constructions of masculinity and their influence on men's well-being: a theory of gender and health. *Soc Sci Med* 50:1385-401
- DeLamater J (2012) Sexual expression in later life: A review and synthesis. *J Sex Res* 49:125–141. doi:10 1080/002 24499 2011 603168
- DeLamater J, Sill M (2005) Sexual desire in later life. *J Sex Res* 42:138–149
- Dworkin SL, O'Sullivan L (2005) Actual versus desired initiation patterns among a sample of college men: Tapping disjunctures within traditional male scripts. *J Sex Res* 42:150–158

Field N, Mercer CH, Sonnenberg P, Tanton C, Clifton S, Mitchell KR ... Johnson AM (2013) Associations between health and sexual lifestyles in Britain: Findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Lancet* 382:1830–1844. doi:10.1016/S0140-6736(13)62222-9

Fileborn B, Thorpe R, Hawkes G, Minichiello V, Pitts M (2015a) Sex and the (older) single girl: Experiences of sex and dating in later life. *J Aging Stud* 33:67–75. doi:10.1016/j.jaging.2015.02.002

Fileborn B, Thorpe R, Hawkes G, Minichiello V, Pitts M, Dune T (2015b) Sex desire and pleasure: Considering the experiences of older Australian women. *Sex Relation Ther* 30:117–130. doi:10.1080/14681994.2014.936722

Gagnon JH, Simon W (2005) *Sexual conduct: The social sources of human sexuality*. New Brunswick NJ: Aldine Transaction

Gott M, Hinchliff S (2003) How important is sex in later life? The views of older people. *Soc Sci Med* 56:1617–1628. doi:10.1016/s0277-9536(02)00180-6

Gott M, Hinchliff S, Galena E (2004) General practitioner attitudes to discussing sexual health issues with older people. *Soc Sci Med* 58:2093–2103. doi:10.1016/j.socscimed.2003.08.025

Graham CA, Mercer CH, Tanton C, Jones KG, Johnson AM, Wellings K, Mitchell KR (2017) What factors are associated with reporting lacking interest in sex and how do these vary by gender? Findings from the third British national survey of sexual attitudes and lifestyles. *BMJ open* 7(9) e016942

Hinchliff S, Gott M, Wylie K (2012) A Qualitative Study of Heterosexual Women's Attempts to Renegotiate Sexual Relationships in the Context of Severe Sexual Problems. *Arch Sex Behav* DOI 10.1007/s10508-012-9903-0

Horvath M, Brown J (2010) Between a rock and a hard place. *The Psychologist* 23:556–559

Jagus CE, Benbow SM (2002) Sexuality in older men with mental health problems. *Sex Relation Ther* 17:271–279. doi:10.1080/14681990220149077

Jones KG, Mitchell KR, Ploubidis GB, Wellings K, Datta J, Johnson AM, Mercer CH (2015) The Natsal-SF Measure of Sexual Function: Comparison of Three Scoring Methods. *J Sex Res* 52(6):640–646

Karraker A, DeLamater J (2013) Past-year sexual inactivity among older married persons and their partners. *J Marriage Fam* 75:142–163 doi:10.1111/j.17413737.2012.01034.x

Kleinplatz P, Menard D, Paradis N, Campbell M, Dagleish T (2013) Beyond sexual stereotypes: Revealing group similarities and differences in optimal sexuality. *Can J Behav Sci* 45:250–258. doi:10.1037/a0031776

Klusmann D (2002) Sexual motivation and the duration of partnership. *Arch Sex Behav* 31:275–287. doi:10.1023/A:1015205020769

Laumann EO, Nicolosi A, Glasser DB, Paik A, Gingell C, Moreira E, Wang T for the GSSAB Investigators' Group (2005) Sexual problems among women and men aged 40–80 years: Prevalence and correlates identified in the Global Study of Sexual Attitudes and Behaviors. *Int J Impot Res* 17:39–57

Laumann EO, Das A, Waite LJ (2008) Sexual dysfunction among older adults: Prevalence and risk factors from a nationally representative U S probability sample of men and women 57–85 years of age. *J Sex Med* 5:2300–2311

Lindau ST, Gavrilova N (2010) Sex health and years of sexually active life gained due to good health: Evidence from two US population based cross sectional surveys of ageing. *BMJ* 340:1–11

Lindau ST, Schumm LP, Laumann EO, Levinson W, O'Muircheartaigh CA, Waite LJ (2007) A study of sexuality and health among older adults in the United States. *N Engl J Med* 357:762–774. <https://doi.org/10.1056/NEJMoA067423>

Lodge AC, Umberson D (2013) Age and embodied masculinities: Midlife gay and heterosexual men talk about their bodies. *J Aging Stud* 27:225–232. doi:10.1016/j.jaging.2013.03.004

Masters TN, Casey E, Wells EA, Morrison DM (2012) Sexual scripts among young heterosexually active men and women: Continuity and change. *J Sex Res* 161–172. doi:10.1080/00224499.2012.661102

Milhausen R, Herold E (1999) Does the Sexual Double Standard Still Exist? Perceptions of University Women. *J Sex Res* 36(4):361-368

Mitchell KR, Mercer CH, Ploubidis GB, Jones KG, Datta J, Field J ... Wellings K (2013) Sexual function in Britain: Findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Lancet* 382:817–1829

Minichiello V, Plummer D, Loxton D (2004) Factors predicting sexual relationships in older people: An Australian study. *Australas J Ageing* 23:125–130. doi:10.1111/j.17416612.2004.00018.x

Moreira ED, Jr Glasser DB, King R, Duarte F, Gingell C, GSSAB Investigators' Group (2008) Sexual difficulties and helpseeking among mature adults in Australia: Results from the Global Study of Sexual Attitudes and Behaviors. *Sex Health* 5:227–234

Murray S, Milhausen R (2012) Factors impacting women's sexual desire: Examining long-term relationships in emerging adulthood. *Can J Hum Sex* 21:101–115

Murray S, Milhausen R, Graham C, Kuczynski L (2017) A Qualitative Exploration of Factors That Affect Sexual Desire Among Men Aged 30 to 65 in Long-Term Relationships. *J Sex Res* 54(3):319–330

Peixoto M, Nobre P (2015) Prevalence and sociodemographic predictors of sexual problems in Portugal: A population-based study with women aged 18 to 79 years. *J Sex Marital Ther* 41:169–180

Schick V, Herbenick D, Reece M, Sanders SA, Dodge B, Middlestadt SE, Fortenberry J D (2010) Sexual behaviors condom use and sexual health of Americans over 50: Implications for sexual health promotion for older adults. *J Sex Med* 7(Suppl 5) 315–329. doi:10.1111/j.1743-6109.2010.02013.x

Sinclair VG, Dowdy SW (2005) Development and validation of the Emotional Intimacy Scale. *J Nurs Meas* 13:193–206

Syme ML (2014) The evolving concept of older adult sexual behavior and its benefits. *Generations* 38 35–41

Træen B, Stigum H (2010) Sexual problems in 18–67year-old Norwegians. *Scand J Public Health* 38:445–456

Træen B, Hald GM, Graham C, Enzlin P, Janssen E, Kvalem IL, Carvalheira, A, Štulhofer A (2017) An overview of the literature on sexuality in older adults (65+) Part 1: Sexual function and its difficulties *Int J Sex Health* 29 1–10 <https://doi.org/10.1080/19317611.2016.1224286>

Wiederman MW (2005) The gendered nature of sexual scripts. *The Family Journal* 13(4):496-502 doi:10.1177/1066480705278729

Table 1. Basic Sociodemographic Characteristics of the Sample by Country

	Norway		Denmark		Belgium		Portugal		
	Men	Women	Men	Women	Men	Women	Men	Women	
	<i>n</i> (%)		<i>n</i> (%)		<i>n</i> (%)		<i>n</i> (%)		
Age									
	60-65	227 (35.8)	226 (35.5)	142 (27.1)	147 (28.2)	139 (28.6)	193 (38.2)	84 (36.3)	96 (34.7)
	66-70	220 (34.8)	216 (34.0)	166 (31.7)	166 (31.8)	182 (37.5)	170 (33.7)	81 (35.0)	100 (36.0)
	71-75	187 (29.5)	194 (30.5)	215 (41.1)	209 (40.1)	165 (33.9)	142 (28.1)	67 (28.8)	81 (29.3)
Education									
	Primary education	67 (10.6)	59 (9.3)	148 (28.6)	137 (26.4)	54 (11.2)	65 (13.1)	80 (34.6)	116 (42.4)
	Secondary education	211 (33.3)	257 (40.4)	188 (36.3)	202 (38.8)	240 (49.3)	265 (53.2)	109 (46.9)	114 (41.8)
	Tertiary education	356 (56.1)	318 (49.9)	182 (35.0)	181 (34.8)	192 (39.5)	168 (33.7)	43 (18.5)	43 (15.8)
Relationship Status									
	No partner	112 (17.8)	195 (30.7)	86 (16.5)	81 (15.6)	101 (20.9)	268 (53.1)	17 (7.3)	74 (26.9)
	Partnered	519 (82.2)	440 (69.3)	437 (83.5)	440 (84.4)	384 (79.1)	236 (46.8)	215 (92.7)	203 (73.1)
Religiosity									
	Never	251 (40.1)	174 (27.5)	187 (36.1)	130 (25.2)	212 (43.8)	221 (44.6)	53 (23.6)	49 (18.3)
	Less than once a year	147 (23.4)	148 (23.4)	120 (23.0)	129 (25.0)	73 (15.1)	47 (9.5)	34 (15.2)	34 (12.7)
	Once a year	84 (13.4)	69 (11.0)	72 (13.9)	81 (15.6)	25 (5.1)	32 (6.4)	25 (10.9)	10 (3.8)
	Twice a year	77 (12.2)	129 (20.4)	75 (14.5)	101 (19.5)	83 (17.1)	97 (19.6)	39 (17.5)	37 (13.7)
	Once a month	34 (5.4)	46 (7.3)	32 (6.2)	49 (9.4)	29 (5.9)	42 (8.4)	26 (11.4)	33 (12.2)
	Once every two weeks	16 (2.6)	35 (5.6)	14 (2.6)	14 (2.7)	19 (3.9)	17 (3.5)	12 (5.1)	25 (9.4)
	Once a week or more	18 (2.9)	30 (4.8)	19 (3.6)	14 (2.6)	43 (9.0)	40 (8.0)	37 (16.4)	80 (29.9)
Place of residence									
	Rural	223 (35.3)	208 (33.1)	190 (36.5)	175 (34.5)	104 (21.6)	132 (26.7)	48 (20.8)	64 (23.6)
	Small town	234 (37.0)	238 (38.0)	180 (34.6)	181 (35.7)	246 (51.1)	193 (38.9)	59 (25.5)	52 (19.1)
	Medium sized city	76 (12.0)	77 (12.2)	73 (14.0)	66 (13.1)	51 (10.6)	67 (13.6)	48 (20.7)	56 (20.6)
	Suburb of a large city	40 (6.4)	32 (5.2)	37 (7.2)	33 (6.5)	51 (10.5)	57 (11.5)	18 (7.8)	18 (6.6)
	Central large city	58 (9.2)	66 (10.6)	38 (7.4)	47 (9.2)	25 (5.3)	29 (5.9)	56 (24.3)	79 (29.1)

Other	1 (0.2)	6 (1.0)	2 (0.4)	5 (1.0)	4 (0.9)	16 (3.3)	2 (0.9)	3 (1.0)
-------	---------	---------	---------	---------	---------	----------	---------	---------

Table 2. Frequency of Sexual Avoidance (in the last year) Among Men and Women in a Steady Relationship (percentage)

	Men <i>n</i> = 1476	Women <i>n</i> = 1184
Never	59.1	33.0
Rarely	22.0	27.5
Sometimes	7.9	23.6
Often	4.5	6.1
Always or almost always	6.5	9.8

Table 3. Reasons to Avoid Sex in Partnered Men and Women by Country

	Men					<i>p</i> <*	Women					<i>p</i> <*
	Norway n = 211	Denmark n = 152	Belgium n = 162	Portugal n = 78	Total n = 603		Norway n = 279	Denmark n = 254	Belgium n = 148	Portugal n = 113	Total n = 794	
	%						%					
Relationship Problems	6.0	11.6	16.7	11.5	11.0	.05	6.1	8.2	9.2	9.1	7.8	
Worries about STIs	0.0	0.6	2.1	0.0	0.7		0.0	0.0	0.4	1.2	0.3	
Sexual Difficulties	20.3	28.8	15.4	35.4	23.1	.01	10.1	7.3	5.3	15.6	9.1	.05
Partner sexual Difficulties	24.0	18.9	13.3	15.1	18.7		18.7	23.6	15.9	16.7	19.5	
Body image Concerns	0.0	1.4	1.6	1.6	0.9		2.6	2.2	5.4	0.0	2.6	
Health Problems	19.3	13.8	28.9	30.9	22.0	.001	23.2	17.0	32.0	25.8	23.2	
Not interested on sex anymore	6.7	12.5	12.1	4.6	9.3		11.3	17.3	19.8	8.2	14.4	.05
Other Reasons	32.8	18.5	18.3	21.0	23.8		39.0	29.2	23.4	27.0	31.2	.01

Notes. STI = Sexually Transmitted Infections; * Significant differences across country (Chi-square test was used)

Table 4. Sociodemographic, Relational, and Health-Related Correlates/Predictors of Sexual Avoidance Among Partnered Men (N = 1087)

	Model A	Model B	Model C
	OR (95% CI)	OR (95% CI)	OR (95% CI)
Sociodemographic indicators			
Country of residence			
Norway	1	1	1
Denmark	.87 (.58 – 1.30)	.91 (.60 – 1.38)	.99 (.64 – 1.54)
Belgium	1.28 (.87 – 1.90)	1.16 (.77 - 1.74)	1.03 (.66 – 1.60)
Portugal	.81 (.45 – 1.44)	.75 (.41 – 1.38)	.57 (.29 – 1.10)
Age	1.04 (1.00 – 1.08)*	1.04 (1.01 – 1.09)*	1.04 (1.00 – 1.09)*
Educational level			
Primary education (ref)	1	1	1
Secondary education	.84 (.53 – 1.33)	.95 (.59 – 1.54)	.99 (.60 – 1.66)
University level	.795 (.50 – 1.25)	.85 (.53 – 1.37)	.98 (.60 – 1.62)
Religiosity	1.04 (.90 – 1.19)	1.08 (.93 – 1.24)	1.10 (.94 – 1.28)
Relational indicators			
Relationship duration		.99 (.98 – 1.00)	.99 (.98 – 1.00)
Relationship satisfaction		1.29 (1.14 – 1.46)***	1.14 (.99 – 1.31)
Relationship intimacy		1.29 (1.00 – 1.68)	1.34 (1.01 – 1.78)*
Health-related indicators			
SF-12 physical health			.97 (.95 - .99)**
SF-12 mental health			1.00 (.98 – 1.03)
Distressing sexual problems			1.11 (1.08 - 1.15) ***
Partner's sexual problems			.76 (.66 - .88)***
Nagelkerke ΔR^2	.02	.05	.12

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5. Sociodemographic, Relational, and Health-Related Correlates/Predictors of Sexual Avoidance Among Partnered Women (N = 906)

	Model A	Model B	Model C
	OR (95% CI)	OR (95% CI)	OR (95% CI)
Sociodemographic indicators			
Country of residence			
Norway	1	1	1
Denmark	1.13 (.80 - 1.58)	1.24 (.87 - 1.77)	1.30 (.89 - 1.90)
Belgium	1.14 (.77 - 1.70)	1.08 (.70 - 1.65)	.89 (.56 - 1.40)
Portugal	.83 (.51 - 1.34)	.69 (.41 - 1.16)	.47 (.26 - .83)*
Age	.96 (.92 - .99)*	.93 (.90 - .97)**	.93 (.90 - .97)**
Educational level			
Primary education (ref)	1	1	1
Secondary education	.75 (.49 - 1.15)	.80 (.51 - 1.26)	.82 (.51 - 1.32)
University level	.64 (.41 - .99)	.69 (.43 - 1.09)	.71 (.43 - 1.16)
Religiosity	.93 (.82 - 1.06)	.93 (.81 - 1.07)	.92 (.80 - 1.07)
Relational indicators			
Relationship duration		1.01 (1.00 - 1.02)**	1.01 (1.00 - 1.03)**
Relationship satisfaction		1.39 (1.18 - 1.63)***	1.18 (1.00 - 1.40)*
Relationship intimacy		1.62 (1.25 - 2.11)***	1.52 (1.16 - 2.01)**
Health-related indicators			
SF-12 physical health			.98 (.96 - .99)*
SF-12 mental health			.96 (.94 - .98)***
Distressing sexual problems			1.10 (1.07 - 1.13)***
Partner's sexual problems			.86 (.77 - .97)**
Nagelkerke ΔR^2	.02	.05	.12

* $p < .05$, ** $p < .01$, *** $p < .001$

