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We Need to Talk: Disclosure of Sexual Problems Is Associated With Depression, Sexual Functioning, and Relationship Satisfaction in Women

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Women with sexual problems (e.g., difficulties with desire, arousal, lubrication, orgasm, and pain during sexual activity) experience more depressive symptoms, and poorer sexual functioning and relationship satisfaction compared with unaffected women. A robust literature highlights the importance of sexual communication, and sexual self-disclosures in particular, for the well-being of individuals in romantic relationships. However, little is known about the disclosure of sexual problems to romantic partners and its association with women's psychological, sexual, and relationship well-being. This study examined the proportion of women ($N = 277$) who disclose (vs. do not disclose) sexual problems to their partner, and the consequences of disclosure. Women ($M_{age} = 29.79$, $SD = 6.54$) completed online validated measures assessing sexual problems, relationship satisfaction, sexual functioning, and depressive symptoms. The majority (69.3%) reported disclosing sexual problems to their current romantic partner. Disclosers reported fewer depressive symptoms, and greater sexual functioning and relationship satisfaction compared to nondisclosers. Disclosing sexual problems may benefit women's well-being by enhancing intimacy or allowing couples to adapt sexual activities to accommodate sexual problems. Clinicians might use cognitive-behavioral strategies to assist women in disclosing sexual problems to partners to maximize the potential psychological, sexual, and relationship benefits.

INTRODUCTION

Sexual problems refer to difficulties in sexual functioning (e.g., desire, arousal, lubrication, orgasm, and pain during sexual activity), which may or may not meet the full diagnostic

criteria for a sexual dysfunction. In a population-based study, Shifren and colleagues (2008) found that 43% of women reported currently experiencing at least one sexual problem, and 12% reported significant distress about their sexual problem(s). Sexual problems can adversely affect women's psychological, sexual, and relationship well-being. They are associated with greater depressive symptoms (Dunn, Croft, & Hackett, 1999; Echeverry, Arango, Castro, & Raigosa, 2010), poorer overall sexual functioning (Meana, Binik, Khalifé, & Cohen, 1997; Rosen et al., 2000), and lower relationship satisfaction (Burri, Radwan, & Bodenmann, 2015; Burri & Spector, 2011).

There is growing evidence for the importance of interpersonal factors, such as couples' communication, in the experience of sexual problems (Byers & MacNeil, 1997; Hirayama & Walker, 2010; Pazmany, Bergeron, Verhaeghe, Van Oudenhove, & Enzlin, 2014, 2015; Rancourt, Rosen, Bergeron, & Nealis, 2016). For example, perceptions of better sexual communication between partners have been linked to lower depressive symptoms, and greater sexual functioning and relationship satisfaction in women suffering from genito-pelvic pain during intercourse (Pazmany et al., 2015; Rancourt et al., 2016). However, little is known about the actual disclosure of sexual problems to one's romantic partner. That is, research has not yet examined whether informing a partner of one's experience of sexual problems is associated with the related psychological and relational consequences experienced by affected women. Examining whether the disclosure of a sexual problem relates to women's well-being could lead to improved prevention and treatment for the many women and couples experiencing distressing sexual problems. The present study filled this gap in knowledge by examining (a) the proportion of women with distressing sexual problems that have disclosed a sexual problem(s) to their romantic partner and (b) the associations between disclosure (vs. nondisclosure) of sexual problems and women's depressive symptoms, sexual functioning, and relationship satisfaction.

Disclosure refers to the sharing of personal thoughts, feelings, and information with another person for the first time (Jourard, 1971; Laurenceau, Barrett, & Pietromonaco, 1998). In a study of 576 premenopausal women experiencing pain during sexual intercourse, 33% of women reported that they had not disclosed this sexual problem to their partner (Elmerstig, Wijma, & Swahnberg, 2013). Similarly, in a sample of 344 older women (57 to 85 years) with a sexual problem of some type, 69% of women reported telling their partners that they were experiencing a sexual problem(s) (Hirayama & Walker, 2010). Thus, previous literature examining the proportion of women who tell their partners about sexual problems is limited to disclosure of one specific type of sexual problem (Elmerstig et al., 2013) and to samples of older women (Hirayama & Walker, 2010). Given that the prevalence of sexual problems differs across the life span (Laumann, Paik, & Rosen, 1999; Shifren et al., 2008), it is possible that the proportion of women who disclose sexual problems to their partner may also differ between younger (18 to 45 years) and older (57 to 85 years) women. In addition, prior research has not considered the experience of distress in the operationalization of sexual problems. To advance work in this area, it is essential to examine disclosure to partners of one or more of a range of distressing sexual problems among younger women. Such research will provide insights into the potential for this disclosure to be beneficial or detrimental to women's well-being.

In comparison to subsequent general discussions with a partner about sexual problems, initial disclosure may be critical because of its potential for greater subjective stress and anticipation

regarding a partner's response when first revealing sexual problems to a partner. Prior research in the area of disclosure of sexual orientation exemplifies how initial disclosure can be more stressful than all subsequent discussions due to heightened fears of negative responses (Day & Schoenrade, 1997). Initial disclosure may have lasting or more general effects on a relationship, whether positive (e.g., improved relationship satisfaction) or negative (e.g., increased relationship discord and psychological distress). It is also possible that individual or relational characteristics, such as depressive symptoms or relationship satisfaction, might influence the propensity to disclose a sexual problem.

Theories of sexual communication (i.e., the discussion of sexual matters or topics) posit that greater sexual communication leads to enhanced sexual and relationship well-being (MacNeil & Byers, 2009; Mark & Jozkowski, 2013; Montesi, Fauber, Gordon, & Heimberg, 2010; Rehman, Rellini, & Fallis, 2011). MacNeil and Byers (2005, 2009; see also Cupach & Metts, 1991) describe two pathways by which sexual self-disclosure may be beneficial to sexual relationships. Through the instrumental pathway, sexual self-disclosure allows partners to better understand each other's sexual needs and preferences, leading to greater sexual satisfaction. Through the expressive pathway, sexual self-disclosure enhances feelings of intimacy, thereby increasing sexual satisfaction. In support of these pathways, disclosing sexual likes and dislikes to a partner has been associated with greater sexual functioning and relationship satisfaction in community samples (Byers & Demmons, 1999; Coffelt & Hess, 2014; Cupach & Metts, 1991; Rehman et al., 2011). This model has been extended to understand associations between greater sexual communication (in general) and fewer depressive symptoms as well as higher sexual functioning and relationship satisfaction in a sample of women experiencing pain during intercourse (Rancourt et al., 2016). This theoretical model might also apply to the disclosure of all types of distressing sexual problems. Disclosing sexual problems to one's partner could—via the instrumental pathway—allow a couple to adapt sexual activities to accommodate the sexual problems, thus improving sexual functioning. Telling one's partner about sexual problems could also—via the expressive pathway—enhance intimacy, thereby contributing to greater sexual functioning and relationship satisfaction and fewer depressive symptoms. In contrast, *not* disclosing sexual problems to one's romantic partner may interfere with these pathways and therefore have detrimental consequences for women's sexual functioning, relationship satisfaction, and depressive symptoms. In support of these processes, Hirayama and Walker (2010) found that not disclosing a sexual problem to one's partner was associated with lower levels of general happiness and greater depressive symptoms in their sample of postmenopausal women.

Current Study

The current study used a cross-sectional design to investigate the proportion of younger (18 to 45 years) women with distressing sexual problems who had disclosed (vs. not disclosed) their problems to their current romantic partners. We also examined the associations between disclosure (vs. nondisclosure) of sexual problems and women's depressive symptoms, sexual functioning, and relationship satisfaction. Based on theories of sexual communication and prior literature on sexual self-disclosure, we hypothesized that women who have disclosed their sexual problems to their partners would report lower depressive symptoms, and greater sexual functioning

and relationship satisfaction compared to those who have not disclosed sexual problems to their partners.

METHOD

Participants

The final sample included 277 women. The inclusion criteria were as follows: (1) currently experiencing one or more sexual problem(s) that is at least mildly distressing (see description of sexual problems and distress in the Measures section); (2) in a committed romantic relationship for at least three months but no more than two years (to reduce recall bias regarding initial disclosure); (3) currently sexually active with their partner (engaged in vaginal, oral, manual, or anal sex at least once in the previous four weeks); and (4) between 18 and 45 years of age. Despite posting the eligibility criteria in the study advertisement, of 454 potential participants, 129 (28.41%) were ineligible: 47 (10.35%) did not report experiencing a sexual problem, 72 (15.86%) reported no distress associated with their sexual problems, two (0.44%) self-identified their sex as male, seven (1.54%) had a relationship duration of more than two years, and one (0.22%) was found to have completed the survey multiple times. Of the 325 women who were eligible after initial screening, one (0.31%) was removed for completing the survey in less than five minutes (the average time to complete the survey was 27.42 minutes, $SD = 15.54$) and 47 (14.46%) were excluded from data analyses for failing one or both of the attention checks, resulting in the final sample size of 277 women. Twenty-seven (9.75%) women were in same-sex relationships, and all remaining women were in mixed-sex relationships.

Procedure

Participants were recruited through an advertisement on Amazon Mechanical Turk (MTurk), an online recruitment source. Prior research has indicated that participants recruited through MTurk are more demographically diverse than both U.S. university samples and standard Internet samples (Buhrmester, Kwang, & Gosling, 2011). Interested participants followed a link to an online eligibility screening questionnaire (described in the Measures section) through Qualtrics Research Suite, a secure online survey program. Eligible participants provided their informed consent online and completed the following: a demographics questionnaire, a single question to determine whether they had disclosed their sexual problem(s) to their current partner, and standardized measures assessing their sexual functioning, relationship satisfaction, and depressive symptoms. Two attention-check questions were embedded within the measures to verify that each participant's attention was engaged during the study. Both attention-check questions asked participants to select a particular number on a Likert-type scale. Participants were compensated for completing the study with a payment of \$2.40, in line with MTurk standards for compensation (Mason & Suri, 2012), and received a list of resources about sexual health and problems, mental health, and relationships. Upon completion of the study, participants read a written debriefing form. The study was approved by our institutional research ethics board.

Measures

Demographics

Information on participants' age, relationship status, relationship duration, level of education, ethnicity, sex of current partner, and frequency of sexual activity in the prior month were collected through self-report questions.

Eligibility Screening for Sexual Problems and Associated Distress

Eight items from the Sexual Functioning Questionnaire (SFQ; Frank, Anderson, & Rubinstein, 1978; Renaud & Byers, 2001) were used to determine whether participants were experiencing sexual problems in their current relationship. The SFQ assesses the frequency of eight types of sexual problems (unable to relax during sex, not interested in sex, feeling turned off, difficulty with sexual arousal, difficulty with sexual excitement, reaching orgasm too quickly, unable to reach orgasm, taking too long to reach orgasm). A ninth item was added to assess the frequency of pain during sexual activity. Participants rated how often they experienced each type of sexual problem on a 5-point Likert scale consisting of 1 (*never*), 2 (*rarely*), 3 (*sometimes*), 4 (*often*), or 5 (*always*). Participants had to report experiencing one or more of the sexual problems sometimes, often, or always (i.e., ≥ 3 on the Likert scale) during their current relationship to be eligible for the study. The internal consistency in the present sample was $\alpha = .76$ for disclosers and .80 for nondisclosers.

We next asked participants how much distress (if any) they experienced for each sexual problem endorsed on the SFQ in their current romantic relationship. Participants responded on a 4-point Likert scale, consisting of 1 (*no distress*), 2 (*slight distress*), 3 (*moderate distress*), or 4 (*a great deal of distress*). Participants had to report experiencing at least slight distress (i.e., ≥ 2 on the Likert scale) about their sexual problems in their current relationship to be eligible for the study.

Disclosure Status

Disclosure of sexual problems was assessed by asking participants "Have you disclosed (i.e., told or discussed) your sexual problem(s) to your current romantic partner?" with response options of yes or no.

Depressive Symptoms

The Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) was administered to assess depressive symptoms. The BDI-II is a well-validated, widely adopted measure consisting of 21 items that are rated on a 4-point Likert scale from 0 to 3. Total scores can range from 0 to 63, and higher scores indicate greater depressive symptoms.

The internal consistency in the present sample was $\alpha = .94$ for disclosers and .95 for nondisclosers.

Sexual Functioning

The Female Sexual Function Index (FSFI; Rosen et al., 2000) was used to assess six domains of women's sexual functioning: desire, lubrication, orgasm, pain, arousal, and satisfaction. This measure has strong psychometric properties and consists of 19 items that participants respond to on a 5- or 6-point Likert scale. Total scores can range from 2 to 36, and higher scores indicate greater sexual functioning. The internal consistency in the present sample was $\alpha = .94$ for disclosers and .91 for nondisclosers.

Relationship Satisfaction

Relationship satisfaction was assessed using the 16-item short form of the Couple Satisfaction Index (CSI-16; Funk & Rogge, 2007). This well-validated measure asks participants to respond on a 6- or 7-point Likert scale to statements about their current relationship. Total scores can range from 0 to 81, and higher scores indicate greater relationship satisfaction. The Cronbach's alphas in the current study were $\alpha = .97$ for disclosers and .97 for nondisclosers.

Data Analyses

Data were analyzed using SPSS (version 22.0). Person mean substitution was used for missing data in cases where less than 10% of data from a questionnaire was missing. Preliminary analyses evaluated the data for violations of assumptions and revealed that the data for sexual functioning (i.e., the FSFI) violated the assumptions of normality and homogeneity of variance, whereas the data for relationship satisfaction and depressive symptoms met both assumptions. Given these violations, Welch's *F* test (Welch, 1951), a modification of the ANOVA procedure that is more robust to heterogeneity of variance (De Beuckelaer, 1996; Harwell, Rubenstein, Hayes, & Olds, 1992), was used to examine differences in sexual functioning. Multivariate analysis of variance (MANOVA) and separate follow-up univariate analyses (ANOVAs) were used to examine differences in depressive symptoms and relationship satisfaction between women who had disclosed sexual problems to their partners (disclosers) and women who had not disclosed (nondisclosers).

RESULTS

Descriptive characteristics of the sample are reported in Table 1. Sexual functioning had a moderate positive correlation with relationship satisfaction ($r_s = 0.49, p < .01$) and a moderate negative correlation with depressive symptoms ($r_s = -0.41, p < .01$). Relationship satisfaction and depressive symptoms were moderately negatively correlated ($r_s = -0.44, p < .01$).

TABLE 1
Descriptive Statistics of Sample Demographics for Women who Disclosed Sexual Problems (Disclosers) and Women who Did Not Disclose (Nondisclosers), and the Comparison Between Groups Where Appropriate

Variable	Disclosers <i>n</i> = 192	Nondisclosers <i>n</i> = 85	<i>p</i>
Age	30.27 (6.74)	28.72 (5.98)	.06 ^c
Culture			.11 ^b
American	85.41%	77.64%	
Other ^a	14.59%	22.36%	
Level of Education			.48 ^b
Some high school	1.04%	2.35%	
High school degree	8.33%	12.94%	
Some college/university	35.94%	28.24%	
College/university diploma	41.15%	43.53%	
Vocational degree	2.60%	1.18%	
Postgraduate degree	10.42%	9.41%	
Other	0.52%	2.35%	
Relationship Duration (in Months)	13.58 (5.46)	13.40 (5.67)	.81 ^c
Sex of Partner			.75 ^b
Male	90.60%	89.40%	
Female	9.40%	10.60%	
Number of Sexual Problems (range 1–9)	5.29 (2.39)	5.69 (2.28)	.40 ^c

Note. Percentage values are % of group (disclosers vs. nondisclosers) sample; other values are mean (*SD*).

^a“Other” group for self-identified culture consisted of English Canadian, Eastern European, Western European, African, Asian, Middle Eastern, Latin American/South American, and Caribbean.

^bDisclosers and nondisclosers were compared using Pearson chi-square tests.

^cDisclosers and nondisclosers were compared using independent samples *t* tests.

Proportion of Women who Disclosed Sexual Problems

The majority of our sample (93.5%) reported experiencing multiple sexual problems ($M = 5.29$, $SD = 2.39$ for disclosers and $M = 5.69$, $SD = 2.28$ for nondisclosers). A detailed description of the type of sexual problems endorsed by disclosers and nondisclosers is reported in Table 2. No differences in disclosure status (i.e., discloser vs. nondiscloser) were observed between the types of sexual problems, but true differences may have been obscured due to the high level of comorbidity in sexual problems that was found in this sample. The number of sexual problems endorsed did not differ between disclosers and nondisclosers, $t(275) = -1.33$, $p = .19$, and number of sexual problems was unrelated to any of the outcome measures of well-being. The majority of women (69.3%, $n = 192$) reported that they had disclosed their sexual problems to their current romantic partner (“disclosers”), whereas 30.7% ($n = 85$) reported that they had not disclosed their sexual problems to their current partner (“nondisclosers”).

Associations Between Disclosure and Psychological, Sexual, and Relationship Well-Being

With regard to sexual functioning, the results of the Welch’s *F* test ($N = 272$) revealed that disclosers ($M = 23.93$, $SD = 5.93$) reported significantly greater sexual functioning than did

TABLE 2
 Number of Women (Disclosers and Nondisclosers) who Endorsed Experiencing Each Type of Sexual Problem on the SFQ

<i>Type of Sexual Problem</i>	<i>Disclosers n = 192</i>	<i>Nondisclosers n = 85</i>	<i>p</i>
I am unable to relax during sex	119 (62.0%)	54 (63.5%)	.89
I am not interested in sex	121 (63.0%)	51 (60.0%)	.68
I feel turned off	111 (57.8%)	60 (70.6%)	.05
I have trouble getting sexually aroused	123 (64.1%)	60 (70.6%)	.34
I have trouble maintaining sexual excitement	116 (60.4%)	61 (71.8%)	.08
I orgasm/come/climax too quickly	58 (30.2%)	17 (20.0%)	.08
I take too long to reach orgasm/climax	153 (79.7%)	71 (83.5%)	.51
I am unable to reach orgasm/climax/come	127 (66.1%)	66 (77.6%)	.07
I experience pain during sexual activity	87 (45.3%)	44 (51.8%)	.36

Note. Percentage values are % of group (disclosers vs. nondisclosers) sample. The frequency of each type of sexual problem in disclosers and nondisclosers was compared using Pearson chi-square tests. SFQ: Sexual Functioning Questionnaire.

nondisclosers ($M = 22.19$, $SD = 5.01$), $F(1, 186.87) = 6.22$, $p = .01$, partial $\eta^2 = .03$. Given their significant moderate intercorrelations, a one-way between-subjects multivariate analysis of variance (MANOVA) was conducted to examine differences between disclosers and nondisclosers on relationship satisfaction and depressive symptoms. Results from the MANOVA indicated a significant main effect of disclosure on relationship satisfaction and depressive symptoms, $F(2, 274) = 3.36$, $p = .04$, $\eta^2 = .02$. Separate follow-up univariate ANOVAs revealed that disclosers reported significantly greater relationship satisfaction ($M = 60.46$, $SD = 14.68$) compared to nondisclosers ($M = 56.13$, $SD = 15.16$), $F(1, 275) = 5.02$, $p = .03$, partial $\eta^2 = .02$, and lower depressive symptoms ($M = 13.71$, $SD = 11.23$) compared to nondisclosers ($M = 17.06$, $SD = 12.94$), $F(1, 275) = 4.76$, $p = .03$, partial $\eta^2 = .02$.

DISCUSSION

This study examined the proportion of younger women (18 to 45 years) with distressing sexual problems that have disclosed (vs. not disclosed) their sexual problems to their partners, as well as the associations between disclosure (or nondisclosure) and women's depressive symptoms, sexual functioning, and relationship satisfaction. Findings indicated that the majority of women disclosed their sexual problems to their partner, and in line with our original hypotheses, that these women reported fewer depressive symptoms, better sexual functioning, and greater relationship satisfaction, compared to the women who had not disclosed. Given the cross-sectional design of this study, the directions of these associations cannot be examined, nor can causality be attributed. Still, our findings are in line with prior research on the rate of disclosure of sexual problems in women experiencing pain during sexual intercourse (Elmerstig et al., 2013) and postmenopausal women with a variety of sexual problems (Hirayama & Walker, 2010). The results of the present study are also consistent with general theoretical models of sexual communication (Cupach & Metts, 1991) and specific models of sexual self-disclosure (MacNeil & Byers, 2005, 2009), which highlights the potential benefits of telling a partner about one's sexual problems.

About two thirds of women in the current sample reported disclosing a distressing sexual problem to their romantic partner. This result is consistent with previous research that has shown that while most women are comfortable talking about sexual problems with their partners, many are not (Colson, Lemaire, Pinton, Hamidi, & Klein, 2006). Furthermore, the rate of disclosure in our sample was highly consistent with a study of the disclosure of pain during intercourse to a romantic partner (Elmerstig et al., 2013) and a study of the disclosure of sexual problems to a partner among older women (Hirayama & Walker, 2010). While prevalence rates of sexual problems differ across the life span (Laumann, Paik, & Rosen, 1999; Shifren et al., 2008), the proportion of women who disclose (vs. do not disclose) these problems to their partners appears to be consistent across ages. It is possible that women may be more likely to disclose when they are experiencing certain sexual problems or multiple sexual problems. We were unable to examine whether the rate of disclosure varied depending on the type of sexual problem in the current study because the vast majority of our sample endorsed multiple sexual problems. However, the number of sexual problems endorsed did not differ between disclosers and nondisclosers, and was unrelated to any of the outcome measures of well-being. Future research should examine how likely women are to disclose the varying types of sexual problems. For example, researchers could ask more specific questions about disclosure for each type of sexual problem that women endorse.

Women who reported disclosing sexual problems to their partner had significantly lower levels of depressive symptoms compared to women who had not told their partner about their sexual problems, which is consistent with the results of Hirayama and Walker (2010). In line with the expressive pathway, disclosing a sexual problem may enhance feelings of partner support and reduce associated negative cognitions, resulting in fewer depressive symptoms. Previous research has indicated that having a sexual problem is linked to women's feelings of isolation, guilt, shame, and inadequacy as a sexual and romantic partner (Ayling & Ussher, 2008; Brauer, van Lunsen, Burger, & Laan, 2015; Katz, 1996). Disclosing a sexual problem may provide the partner with an opportunity to offer support and empathy, potentially helping to alleviate these negative cognitions. An observational study has shown that disclosure and empathic partner responses are linked to lower sexual distress in couples where the woman experiences pain during intercourse (Bois et al., 2015). It is also possible that women with higher levels of depressive symptoms might find it more difficult to tell their partner about their sexual problems. Indeed, depressive symptoms have been shown to affect numerous aspects of communication (Tse & Bond, 2004), such that women with more depressive symptoms engage in less self-disclosure (Biglan et al., 1985; Kahn, Garrison, & Mallinckrodt, 2009; Rehman, Gollan, & Mortimer, 2008).

Rooted in our guiding theoretical model, telling one's partner about a sexual problem may relate to overall sexual functioning—via the instrumental pathway—by allowing the couple to adapt their sexual activities to accommodate the sexual problems, for example, less focus on vaginal penetration if there is pain during sex. Studies have found that a better understanding of a partner's sexual needs and preferences was associated with greater sexual functioning in community samples (Rehman et al., 2011) and in women experiencing pain during intercourse (Bois, Bergeron, Rosen, McDuff, & Grégoire, 2013; Rancourt et al., 2016). In addition, disclosure may encourage help seeking for difficulties in sexual functioning, either as an individual or as a couple. There are several empirically supported treatments for a variety of female sexual problems that have been found to enhance sexual functioning in this population (see Frühauf, Gerger, Schmidt, Munder, & Barth, 2013, for a review). Finally, keeping a sexual problem secret from one's

intimate partner may cause considerable anxiety (Pachankis, 2007). Anxiety, in turn, can exacerbate some sexual problems, such as pain during intercourse, orgasm, and arousal (Bradford & Meston, 2006; de Lucena & Abdo, 2014; Desrochers, Bergeron, Khalifé, Dupuis, & Jodoin, 2009), resulting in poorer overall sexual functioning. It is also possible that women with poorer sexual functioning might be less likely to disclose sexual problems to their partners compared to women experiencing greater sexual functioning. Past research has shown women disclose less about their sexual dislikes than their sexual likes (MacNeil & Byers, 2009), thus, the more a sexual problem negatively impacts sexual functioning (i.e., the more sexual dislikes they are experiencing), the more difficult women may find it to tell their partner about their sexual problem.

Similarly, actively hiding negative personal information from one's partner has been found to predict lower relationship satisfaction (Uysal, Lin, Knee, & Bush, 2012). Consistent with the expressive pathway, it is possible that disclosing a sexual problem (negative personal information) may relate to relationship satisfaction by increasing feelings of intimacy for both members of the couple. Indeed, studies have found that greater intimacy was associated with better relationship satisfaction in community samples (Byers & Demmons, 1999; Coffelt & Hess, 2014). Finally, self-disclosure about a sexual problem may allow both a woman and her partner to cope with the sexual problem together as a couple. Dyadic coping is a collaborative process in which both members of a couple respond to problems or stressor together as a "unit" rather than as two individuals (Bodenmann, 1997, 2005). Previous studies have demonstrated that dyadic coping was associated with greater relationship satisfaction in couples dealing with chronic health conditions (Badr, Carmack, Kashy, Cristofanilli, & Revenson, 2010; Berg & Upchurch, 2007; Coyne et al., 2001). It is also possible that women who are more satisfied in their relationship might be more likely to share their sexual problem with a partner than those who are less satisfied for similar reasons; that is, they feel more confident that their partner will be supportive and that they will cope with it together as a couple.

In addition, given that depressive symptoms, sexual functioning, and relationship satisfaction are interrelated (Burri et al., 2015; Burri & Spector, 2011; Frohlich & Meston, 2002; Laumann et al., 2004; Laurent & Simons, 2009), it is possible that changes in any one area may be associated with changes in the other areas of well-being. Future research should examine the possible mechanisms (e.g., reduction in negative cognitions, adapting sexual activities, greater intimacy) by which disclosure may be linked to greater psychological, sexual, and relationship well-being.

Sexual communication is dyadic in nature: One individual discloses personal thoughts, feelings, and information to a partner and his or her partner responds to this disclosure. In this study, we examined only the role of disclosure of sexual problems. Of course, how a partner responds to this disclosure is also likely to contribute to a woman's overall well-being. Previous research has found that greater perceived partner responsiveness to a self-disclosure was associated with greater relationship satisfaction in community samples (Laurenceau et al., 1998) and in women struggling with painful intercourse (Rosen et al., 2016). In addition, certain styles of partner response to sexual difficulties have been linked to more positive (i.e., greater sexual functioning and relationship satisfaction) or negative outcomes (i.e., poorer sexual functioning and relationship satisfaction and more depressive symptoms) in women experiencing pain during intercourse (Rosen, Bergeron, Sadikaj, Glowacka, Baxter et al., 2014; Rosen, Bergeron, Sadikaj, Glowacka, Delisle et al., 2014; Rosen, Muise, Bergeron, Delisle, & Baxter, 2015) and in community samples (Fallis, Purdon, & Rehman, 2013). Presumably, the potential benefits or consequences of disclosure to women's well-being could depend on partners' responses. Accordingly, it will be important for

future research to examine the possible moderating role of partner response in the associations between disclosure (or nondisclosure) and women's well-being.

Strengths and Limitations

Our study utilized a large community sample of younger women (18 to 45 years) in committed relationships who were experiencing a variety of distressing sexual problems to examine women's disclosure of sexual problems to their partners. We also examined the associations between sexual problem disclosure and multiple areas of women's well-being (depressive symptoms, sexual functioning, and relationship satisfaction). However, several limitations to the present study are important to consider. The majority of our sample were women in mixed-sex relationships, which limits the generalizability of our findings to women in same-sex relationships. Unfortunately, our small sample of women in same-sex relationships ($n = 27$) did not allow us to compare the two groups. In addition, our results cannot be generalized to clinical populations (i.e., women with clinically diagnosed sexual dysfunctions) as we used a community sample and did not require participants to have clinical levels of sexual distress or sexual functioning impairment. Our eligibility criteria required the duration of women's current relationships to be three to 24 months long to reduce recall biases, which limits the generalizability of our findings to women in shorter- and longer-term relationships. Although we limited our sample to younger women (18 to 45 years), we did not confirm their menopausal status, which has been found to be associated with changes in sexual functioning (Laumann et al., 2004; Yücel & Eroğlu, 2013). Although our hypotheses and interpretation of the findings were theoretically based, the cross-sectional study design did not allow us to examine the direction of the associations between disclosure and depressive symptoms, sexual functioning, and relationship satisfaction. Women with lower levels of depressive symptoms, greater sexual functioning, and greater relationship satisfaction may be more likely to disclose sexual problems to their partners. It will be important for future research to use longitudinal designs to examine the temporal order of these relationships.

Conclusions

A growing body of literature highlights the importance of sexual communication, and sexual self-disclosures in particular, for individuals in romantic relationships (Bois et al., 2013; Bois et al., 2016; Byers & Demmons, 1999; Coffelt & Hess, 2014; Cupach & Metts, 1991; MacNeil & Byers, 2005, 2009; Rancourt et al., 2016; Rehman et al., 2011; Rosen et al., 2016). Our findings suggest that the majority of women with sexual problems share this information with their romantic partners, and that this disclosure is associated with fewer depressive symptoms and greater sexual functioning and relationship satisfaction, compared to women who do not disclose their sexual problems. Still, many women struggling with sexual problems report fears about their relationship ending as a consequence, or view sexual problems as a barrier to entering into a romantic relationship (Fritzer et al., 2013; Sheppard, Hallam-Jones, & Wylie, 2008). The current findings suggest that clinicians delivering sex and couples' therapy for women experiencing sexual problems might use cognitive-behavioral or emotion-focused strategies to assist women in disclosing sexual problems to partners so as to maximize potential benefits to their psychological, sexual,

and relationship well-being. Alternatively, targeting the improvement of sexual functioning, depressive symptoms, or the global relationship might facilitate disclosure of any sexual problems and allow the couple to work together on improving their sexual well-being.

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REFERENCES

- Ayling, K., & Ussher, J. M. (2008). "If sex hurts, am I still a woman?" The subjective experience of vulvodynia in heterosexual women. *Archives of Sexual Behavior*, 37, 294–304. doi:10.1007/s10508-007-9204-1
- Badr, H., Carmack, C. L., Kashy, D. A., Cristofanilli, M., & Revenson, T. A. (2010). Dyadic coping in metastatic breast cancer. *Health Psychology*, 29, 169–180. doi:10.1037/a0018165
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.
- Berg, C. A., & Upchurch, R. (2007). A developmental-contextual model of couples coping with chronic illness across the adult life span. *Psychological Bulletin*, 133, 920–954.
- Biglan, A., Hops, H., Sherman, L., Friedman, L. S., Arthur, J., & Osteen, V. (1985). Problem-solving interactions of depressed women and their husbands. *Behavior Therapy*, 16, 431–451. doi:10.1016/S0005-7894(85)80023-X
- Bodenmann, G. (1997). Dyadic coping: A systemic-transactional view of stress and coping among couples: Theory and empirical findings. *European Review of Applied Psychology*, 47, 137–140.
- Bodenmann, G. (2005). Dyadic coping and its significance for marital functioning. In T. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 33–50). Washington, DC: American Psychological Association.
- Bois, K., Bergeron, S., Rosen, N. O., Mayrand, M.-H., Brassard, A., & Sadikaj, G. (2016). Intimacy, sexual satisfaction and sexual distress in vulvodynia couples: An observational study. *Health Psychology*, 35, 531–540. doi:10.1037/hea0000289
- Bois, K., Bergeron, S., Rosen, N. O., McDuff, P., & Grégoire, C. (2013). Sexual and relationship intimacy among women with provoked vestibulodynia and their partners: Associations with sexual satisfaction, sexual function, and pain self-efficacy. *Journal of Sexual Medicine*, 10, 2024–2035. doi:10.1111/jsm.12210
- Bradford, A., & Meston, C. M. (2006). The impact of anxiety on sexual arousal in women. *Behaviour Research and Therapy*, 44, 1067–1077. doi:10.1016/j.brat.2005.08.006

- Brauer, M., van Lunsen, R., Burger, M., & Laan, E. A. (2015). Motives for vulvar surgery of women with lichen sclerosus. *Journal of Sexual Medicine, 12*, 2462–2473. doi:10.1111/jsm.13052
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6*, 3–5. doi:10.1177/1745691610393980
- Burri, A., Radwan, S., & Bodenmann, G. (2015). The role of partner-related fascination in the association between sexual functioning and relationship satisfaction. *Journal of Sex & Marital Therapy, 41*, 672–679. doi:10.1080/0092623X.2014.966398
- Burri, A., & Spector, T. (2011). Recent and lifelong sexual dysfunction in a female U.K. population sample: Prevalence and risk factors. *Journal of Sexual Medicine, 8*, 2420–2430. doi:10.1111/j.1743-6109.2011.02341.x
- Byers, E. S., & Demmons, S. (1999). Sexual satisfaction and sexual self-disclosure within dating relationships. *Journal of Sex Research, 36*, 482–500. doi:10.1080/00224499909551983
- Byers, E. S., & MacNeil, S. (1997). The relationship between sexual problems, communication, and sexual satisfaction. *The Canadian Journal of Human Sexuality, 6*, 277–283.
- Coffelt, T., & Hess, J. (2014). Sexual disclosures: Connections to relational satisfaction and closeness. *Journal of Sex & Marital Therapy, 40*, 577–591. doi:10.1080/0092623X.2013.811449
- Colson, M., Lemaire, A., Pinton, P., Hamidi, K., & Klein, P. (2006). Couples' sexual dysfunction: Sexual behaviors and mental perception, satisfaction and expectations of sex life in men and women in France. *Journal of Sexual Medicine, 3*, 121–131.
- Coyne, J. C., Rohrbaugh, M. J., Shoham, V., Sonnega, J. S., Nicklas, J. M., & Cranford, J. A. (2001). Prognostic importance of marital quality for survival of congestive heart failure. *The American Journal of Cardiology, 88*, 526–529. doi:10.1016/S0002-9149(01)01731-3
- Cupach, W. R., & Metts, S. (1991). Sexuality and communication in close relationships. In K. McKinney & S. Sprecher (Eds.), *Sexuality in close relationships* (pp. 93–110). Hillsdale, NJ: Erlbaum.
- Day, N., & Schoenrade, P. (1997). Staying in the closet versus coming out: Relationships between communication about sexual orientation and work attitudes. *Personnel Psychology, 50*, 147–163. doi:10.1111/j.1744-6570.1997.tb00904.x
- De Beuckelaer, A. (1996). A closer examination on some parametric alternatives to the ANOVA F-test. *Statistical Papers, 37*, 291–305.
- de Lucena, B. B., & Abdo, C. H. N. (2014). Personal factors that contribute to or impair women's ability to achieve orgasm. *International Journal of Impotence Research, 26*, 177–181. doi:10.1038/ijir.2014.8
- Desrochers, G., Bergeron, S., Khalifé, S., Dupuis, M. J., & Jodoin, M. (2009). Fear avoidance and self-efficacy in relation to pain and sexual impairment in women with provoked vestibulodynia. *The Clinical Journal of Pain, 25*, 520–527. doi:10.1097/AJP.0b013e31819976e3
- Dunn, K. M., Croft, P. R., & Hackett, G. I. (1999). Association of sexual problems with social, psychological, and physical problems in men and women: A cross sectional population survey. *Journal of Epidemiology and Community Health, 53*, 144–148.
- Echeverry, M. C., Arango, A., Castro, B., & Raigosa, G. (2010). Study of the prevalence of female sexual dysfunction in sexually active women 18 to 40 years of age in Medellín, Columbia. *Journal of Sexual Medicine, 7*, 2663–2669. doi:10.1111/j.1743-6109.2009.01695.x
- Elmerstig, E., Wijma, B., & Swahnberg, K. (2013). Prioritizing the partner's enjoyment: A population-based study on young Swedish women with experience of pain during vaginal intercourse. *Journal of Psychosomatic Obstetrics & Gynecology, 34*, 82–89. doi:10.3109/0167482X.2013.793665
- Fallis, E. E., Purdon, C., & Rehman, U. S. (2013). Development and validation of the response to sexual difficulties scale. *Archives of Sexual Behavior, 42*, 67–79. doi:10.1007/s10508-012-9973-z
- Frank, E., Anderson, C., & Rubinstein, D. (1978). Frequency of sexual dysfunction in "normal" couples. *The New England Journal of Medicine, 299*, 111–115.
- Fritzer, N., Haas, D., Oppelt, P., Renner, St., Hornung, D., Wölfler, M., ... Hudelist, G. (2013). More than just bad sex: Sexual dysfunction and distress in patients with endometriosis. *European Journal of Obstetrics & Gynecology and Reproductive Biology, 169*, 392–396. doi:10.1016/j.ejogrb.2013.04.001
- Frohlich, P., & Meston, C. (2002). Sexual functioning and self-reported depressive symptoms among college women. *Journal of Sex Research, 39*, 321–325. doi:10.1080/00224490209552156
- Frühau, S., Gerger, H., Schmidt, H., Munder, M., & Barth, T. (2013). Efficacy of psychological interventions for sexual dysfunction: A systematic review and meta-analysis. *Archives of Sexual Behavior, 42*, 915–933. doi:10.1007/s10508-012-0062-0

- Funk, J. L., & Rogge, R. D. (2007). Testing the ruler with item response theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology, 21*, 572–583. doi:10.1037/0893-3200.21.4.572
- Harwell, M. R., Rubenstein, E. N., Hayes, W. S., & Olds, C. C. (1992). Summarizing Monte Carlo results in methodological research: The one- and two-factor fixed effects ANOVA cases. *Journal of Educational Statistics, 17*, 315–339. doi:10.3102/10769986017004315
- Hirayama, R., & Walker, A. J. (2010). Who helps older adults with sexual problems? Confidants versus physicians. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 66B*, 109–118. doi:10.1093/geronb/gbq021
- Jourard, S. (1971). *Self-disclosure: An experimental analysis of the transparent self*. New York, NY: Wiley-Interscience.
- Kahn, J., Garrison, A., & Mallinckrodt, B. (2009). Emotional self-disclosure and emotional avoidance: Relations with symptoms of depression and anxiety. *Journal of Counseling Psychology, 56*, 573–584. doi:10.1037/a0016574
- Katz, S. R. (1996). The experience of chronic vulvar pain: Psychosocial dimensions and the sense of self. *Dissertation Abstracts International: Section B. Sciences and Engineering, 56*, 704B.
- Laumann, E. O., Nicolosi, A., Glasser, D. B., Paik, A., Gingell, C., Moreira, E., & Wang, T. (2004). Sexual problems among women and men aged 40–80 y: Prevalence and correlates identified in the Global Study of Sexual Attitudes and Behaviors. *International Journal of Impotence Research, 17*, 39–57. doi:10.1038/s.ijir.3901250
- Laumann, E. O., Paik, A., & Rosen, R. C. (1999). Sexual dysfunction in the United States: Prevalence and predictors. *JAMA: The Journal of the American Medical Association, 281*, 537–544. doi:10.1001/jama.281.6.537
- Laurenceau, J.-P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology, 74*, 1238–1251. doi:10.1037/0022-3514.74.5.1238
- Laurent, S. M., & Simons, A. D. (2009). Sexual dysfunction in depression and anxiety: Conceptualizing sexual dysfunction as part of an internalizing dimension. *Clinical Psychology Review, 29*, 573–585. doi:10.1016/j.cpr.2009.06.007
- MacNeil, S., & Byers, E. S. (2005). Dyadic assessment of sexual self-disclosure and sexual satisfaction in heterosexual dating couples. *Journal of Social and Personal Relationships, 22*, 169–181. doi:10.1177/0265407505050942
- MacNeil, S., & Byers, E. S. (2009). Role of sexual self-disclosure in the sexual satisfaction of long-term heterosexual couples. *The Journal of Sex Research, 46*, 3–14. doi:10.1080/00224490802398399
- Mark, K. P., & Jozkowski, K. N. (2013). The mediating role of sexual and nonsexual communication between relationship and sexual satisfaction in a sample of college-age heterosexual couples. *Journal of Sex & Marital Therapy, 39*, 410–427. doi:10.1080/0092623X.2011.644652
- Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. *Behavior Research Methods, 44*, 1–23. doi:10.3758/s13428-011-0124-6
- Meana, M., Binik, Y. M., Khalifé, S., & Cohen, D. R. (1997). Biopsychosocial profile of women with dyspareunia. *Obstetrics & Gynecology, 90*, 583–589.
- Montesi, J., Fauber, R., Gordon, E., & Heimberg, R. (2010). The specific importance of communicating about sex to couples' sexual and overall relationship satisfaction. *Journal of Social and Personal Relationships, 28*, 591–609. doi:10.1177/0265407510386833
- Pachankis, J. E. (2007). The psychological implications of concealing a stigma: A cognitive-affective-behavioral model. *Psychological Bulletin, 133*, 328–345. doi:10.1037/0033-2909.133.2.328
- Pazmany, E., Bergeron, S., Veraeghe, J., Van Oudenhove, L., & Enzlin, P. (2014). Sexual communication, dyadic adjustment, and psychosexual well-being in premenopausal women with self-reported dyspareunia and their partners: A controlled study. *Journal of Sexual Medicine, 11*, 1786–1797. doi:10.1111/jsm.12518
- Pazmany, E., Bergeron, S., Veraeghe, J., Van Oudenhove, L., & Enzlin, P. (2015). Dyadic sexual communication in pre-menopausal women with self-reported dyspareunia and their partners: Associations with sexual function, sexual distress and dyadic adjustment. *Journal of Sexual Medicine, 12*, 516–528. doi:10.1111/jsm.12787
- Rancourt, K. M., Rosen, N. O., Bergeron, S., & Nealis, L. J. (2016). Talking about sex when sex is painful: Dyadic sexual communication is associated with women's pain, and couples' sexual and psychological outcomes in provoked vestibulodynia. *Archives of Sexual Behavior, 45*, 1933–1944. doi:10.1007/s10508-015-0670-6
- Rehman, U. S., Gollan, J., & Mortimer, A. R. (2008). The marital context of depression: Research, limitation, and new directions. *Clinical Psychology Review, 28*, 179–198. doi:10.1016/j.cpr.2007.04.007
- Rehman, U. S., Rellini, A., & Fallis, E. (2011). The importance of sexual self-disclosure to sexual satisfaction and functioning in committed relationships. *Journal of Sexual Medicine, 8*, 3108–3115. doi:10.1111/j.1743-6109.2011.02439.x

- Renaud, C. A., & Byers, E. S. (2001). Positive and negative sexual cognitions: Subjective experience and relationships to sexual adjustment. *The Journal of Sex Research, 38*, 252–262. doi:10.1080/00224490109552094
- Rosen, C., Brown, J., Heiman, S., Leiblum, C., Meston, R., Shabsigh, D., ... D'Agostino, R. (2000). The Female Sexual Function Index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex & Marital Therapy, 26*, 191–208. doi:10.1080/009262300278597
- Rosen, N. O., Bergeron, S., Sadikaj, G., Glowacka, M., Baxter, M.-L., & Delisle, I. (2014). Relationship satisfaction moderates the associations between male partner responses and depression in women with vulvodynia: A dyadic daily experience study. *Pain, 155*, 1374–1383. doi:10.1016/j.pain.2014.04.017
- Rosen, N. O., Bergeron, S., Sadikaj, G., Glowacka, M., Delisle, I., & Baxter, M.-L. (2014). Impact of male partner responses on sexual function in women with vulvodynia and their partners: A dyadic daily experience study. *Health Psychology, 33*, 823–831. doi:10.1037/a0034550
- Rosen, N. O., Bois, K., Mayrand, M.-H., Vannier, S., & Bergeron, S. (2016). Observed and perceived disclosure and empathy are associated with better relationship adjustment and quality of life in couples coping with vulvodynia. *Archives of Sexual Behavior, 45*, 1945–1956. doi:10.1007/s10508-016-0739-x
- Rosen, N. O., Muise, A., Bergeron, S., Delisle, I., & Baxter, M.-L. (2015). Daily associations between partner responses and sexual and relationship satisfaction in couples coping with provoked vestibulodynia. *Journal of Sexual Medicine, 12*, 1028–1039. doi:10.1111/jsm.12840
- Sheppard, C., Hallam-Jones, R., & Wylie, K. (2008). Why have you both come? Emotional, relationship, sexual and social issues raised by heterosexual couples seeking sexual therapy (in women referred to a sexual difficulties clinic with a history of vulval pain). *Sexual and Relationship Therapy, 23*, 217–226. doi:10.1080/14681990802227974
- Shifren, J. L., Monz, B. U., Russo, P. A., Segreti, A., & Johannes, C. B. (2008). Sexual problems and distress in United States women: Prevalence and correlates. *Obstetrics & Gynecology, 112*, 970–978.
- Tse, W. S., & Bond, A. J. (2004). The impact of depression on social skills: A review. *The Journal of Nervous and Mental Disease, 192*, 260–268.
- Uysal, A., Lin, H., Knee, C., & Bush, A. (2012). The association between self-concealment from one's partner and relationship well-being. *Personality and Social Psychology Bulletin, 38*, 39–51. doi:10.1177/0146167211429331
- Welch, B. (1951). On the comparison of several mean values: An alternative approach. *Biometrika, 38*, 330–336. Retrieved from <http://www.jstor.org/stable/2332579>
- Yücel, Ç., & Eroğlu, K. (2013). Sexual problems in postmenopausal women and coping methods. *Sexuality and Disability, 31*, 217–228. doi:10.1007/s11195-013-9306-8