



Emotion Regulation in Couples Affected by Female Sexual Interest/Arousal Disorder

Justin P. Dubé¹ · Serena Corsini-Munt¹ · Amy Muise² · Natalie O. Rosen^{1,3}

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Abstract

Female sexual interest/arousal disorder (FSIAD) is associated with psychological, relational, and sexual consequences for affected women, and their romantic partners also suffer repercussions. Prior research suggests that women with FSIAD report more difficulties with emotion regulation than controls. Yet, whether emotion regulation is associated with the psychological, relational, and sexual well-being of both members of affected couples is unknown. Eighty-seven women diagnosed with FSIAD via a clinical interview and their male partners completed standardized measures of difficulties in emotion regulation, depression, anxiety, relationship satisfaction, dyadic conflict, sexual desire, and sexual distress. A subset ($n=71$ couples) also completed measures of emotional suppression and reappraisal in relation to sex. Analyses used multilevel modeling guided by the actor–partner interdependence model. When women reported greater difficulties regulating negative emotion, they reported greater depression and anxiety, and when men reported more of these difficulties, they had greater depression, anxiety, and sexual distress, and the women with FSIAD reported lower relationship satisfaction. When women reported greater emotional suppression, they reported greater depression and anxiety, and lower relationship satisfaction; when they reported greater use of emotional reappraisal, they had fewer symptoms of depression and anxiety, and their partners reported lower dyadic conflict. When men reported greater emotional suppression, they had greater depression, lower relationship satisfaction, and sexual desire; when they reported greater emotional reappraisal, they had lower depression and anxiety, higher relationship satisfaction, lower dyadic conflict, higher sexual desire and women reported higher relationship satisfaction and lower dyadic conflict. Emotion regulation may be an important target for interventions to help couples cope with FSIAD.

Keywords Female sexual interest/arousal disorder · Couples · Emotion regulation · Sexual dysfunction · DSM–5

Introduction

Female sexual interest/arousal disorder (FSIAD) was introduced in the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM–5; American Psychiatric Association, 2013) and combines the former diagnoses of female hypoactive sexual desire disorder (HSDD) and female sexual arousal disorder (FSAD). FSIAD is characterized by at least

three or more of the following symptoms that involve little/lack of: interest in sexual activity; sexual thoughts or fantasies; initiation of sexual activity or responsiveness to a partner's initiations; sexual excitement/pleasure during sexual activity; responsiveness to internal or external sexual cues; and genital or non-genital sensations during sexual activity. The symptoms are present the majority of the time, accompanied by distress, and persist for at least 6 months (American Psychiatric Association, 2013). Using a nationally representative sample, 38.7% and 26.1% of women were estimated to experience low sexual desire and low arousal, respectively, and almost 30% of women with low sexual desire reported sexual distress (Rosen et al., 2009). A recent more stringent prevalence estimate for FSIAD, which included all of the DSM-5 criteria, estimated that 0.6% of women meet the diagnostic criteria for FSIAD (Mitchell et al., 2016). Despite the discrepancy between the frequency of desire and arousal difficulties and the rate at which individuals

✉ Natalie O. Rosen
nrosen@dal.ca

¹ Department of Psychology and Neuroscience, Life Sciences Centre, Dalhousie University, 1355 Oxford Street, P.O. Box 15000, Halifax, NS B3H 4R2, Canada

² Department of Psychology, York University, Toronto, ON, Canada

³ Department of Obstetrics and Gynaecology, IWK Health Centre, Halifax, NS, Canada

may meet diagnostic criteria, low desire and arousal persist as a distressing sexual difficulty for many women.

FSIAD is associated with several psychological and interpersonal problems. Clinically low sexual desire and arousal have been associated with mood disorders (e.g., depression), lower relationship satisfaction, and poorer sexual satisfaction (Laumann, Paik, & Rosen, 1999; Rosen et al., 2009). Although data regarding the impact of FSIAD on romantic partners are scarce, the dysfunction typically occurs in the context of a romantic relationship (Rosen et al., 2009), which suggests that partners may also be negatively affected. Indeed, existing studies indicate partners of women with FSIAD report higher sexual distress and lower relationship satisfaction, sexual satisfaction, functioning, and communication compared to control partners (Rosen, Dubé, Corsini-Munt, & Muise, 2019; Trudel, Aubin, & Matte, 1995; Trudel, Boulos, & Matte, 1993).

Such findings elucidate the scope of influence that a sexual difficulty such as FSIAD may exert on intimate relationships and underscore the importance of dyadic studies examining factors maintaining or exacerbating the sexual difficulty and its associated consequences for couples. One potentially relevant factor is emotion regulation (Chervonsky & Hunt, 2017), which broadly refers to the management of emotional experience and expression in the service of one's goals (Gross, 2014). In both community and clinical populations, emotion regulation has emerged as an important psychological factor associated with relationship and sexual satisfaction (Bloch, Haase, & Levenson, 2014; Rellini, Vujanovic, Gilbert, & Zvolensky, 2012). The present study examined whether emotion regulation in couples affected by FSIAD is associated with their psychological (depression and anxiety), relational (satisfaction and dyadic conflict), and sexual (desire and distress) adjustment, with the goal of informing the development of treatment for couples struggling with this distressing condition.

The etiology of FSIAD is widely considered multifactorial (Krapf, Buster, & Goldstein, 2016), and several psychosocial correlates have been identified. A history of sexual abuse, depression, posttraumatic stress disorder, and poor childhood sex education have been associated with an elevated risk of HSDD (Abdo, Valadares, Oliveira Jr, Scanavino, & Afif-Abdo, 2010; Laumann et al., 1999, 2005). A recent study by Sarin, Amsel, and Binik (2016) found that, compared to healthy controls, women with HSDD/FSAD reported higher levels of negative mood, negative sexual attitudes, sexual dissatisfaction, body image self-consciousness, and sexual distress. The same study found that women with HSDD/FSAD reported more difficulties with emotion regulation compared to controls (but see also DePesa & Cassisi, 2017); however, whether emotion regulation was associated with women's (and partners') psychological, relational, and sexual adjustment was not assessed.

Difficulties with Emotion Regulation

Emotion regulation refers to the process of modulating an emotional response, which includes whether and how an emotion is experienced or expressed (Gross, 1998). Differences in emotion regulation ability and strategies can be conceptualized as more or less adaptive insofar as they mitigate or maintain distress (Hofmann, 2014). In a longitudinal study of married couples, more successful downregulation of negative emotion in women (i.e., more rapid reduction in emotional experience and behavior following emotionally provoking negative events) was cross-sectionally linked to both women's and men's greater marital satisfaction and was linked to women's greater marital satisfaction 13 years later (Bloch et al., 2014). Moreover, greater difficulty regulating negative emotion (e.g., low awareness and clarity of emotion when upset) has been linked to poorer adjustment to several clinical conditions (e.g., Doolan, Bryant, Liddell, & Nickerson, 2017; Lutz, Gross, & Vargovich, 2018), including poorer sexual satisfaction in women with a history of sexual abuse (Rellini et al., 2012; Rellini, Vujanovic, & Zvolensky, 2010). Thus, while FSIAD itself constitutes poor sexual well-being, research suggests that deficits in the ability to regulate negative emotion may be associated with more severe FSIAD symptoms (i.e., lower desire/arousal and heightened distress).

Given that conversations about sex tend to be among the most difficult to negotiate and often provoke feelings of vulnerability and anxiety (Rehman, Lizdek, Fallis, Sutherland, & Goodnight, 2017), emotion regulation may be more salient in the context of couples coping with sexual dysfunctions such as FSIAD. The presence of alexithymia, a personality trait characterized by difficulty identifying one's emotions (Swart, Kortekaas, & Aleman, 2009), has been associated with several sexual dysfunctions, including low sexual desire (Madioni & Mammana, 2001; Wise, Osborne, Strand, Fagan, & Schmidt Jr, 2002). Further, women with FSIAD experience many negative emotions about their condition, attributing low self-confidence, feelings of embarrassment, and fears of partner infidelity to their low sexual desire (Kingsberg, 2014). Given that negative emotions in sexual contexts are linked to impaired desire and arousal, as well as heightened sexual distress; (Bancroft, Loftus, & Long, 2003; Nobre & Pinto-Gouveia, 2006, 2008), it follows that deficits in the ability to regulate negative emotion may be associated with reduced relational and sexual well-being in women with FSIAD and their partners.

Theories of emotion regulation suggest that poor emotion regulation enhances distress and interferes with adaptive coping, resulting in negative psychosocial consequences such as greater anxiety and depression (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Gross, 2002). Difficulty regulating negative emotion has therefore been proposed as a key mechanism influencing how interpersonal factors (e.g., intimacy, attachment,

and sexual communication) affect the well-being of couples in a recent model of women's sexual dysfunction (Rosen & Bergeron, 2019). Applied to FSIAD, those who struggle to regulate their emotions may experience more sexual distress and less adaptive behaviors, such as avoidance of sexual activity or other displays of affection, leading to lower relationship satisfaction and sexual well-being. In addition to emotion regulation difficulties, the strategies by which an individual regulates their emotions may interfere with couples' psychological, relational, and sexual well-being.

Emotion Regulation Strategies

Reappraisal and suppression are two commonly used emotion regulation strategies (John & Gross, 2004). Reappraisal involves modulating an emotional experience by changing how one perceives an emotionally provoking event (John & Gross, 2004). Greater use of this strategy in community samples has been associated with better psychological well-being and more adaptive social functioning, such as seeking social support and emotional closeness (John & Gross, 2004). Suppression involves inhibiting one's emotional reaction to an event and, compared to reappraisal, has been associated with less favorable social functioning, such as impaired memory for social information, less authenticity, more stressful social interactions, and lower relationship quality (Chervonsky & Hunt, 2017; John & Gross, 2004). Greater use of suppression has been linked to poorer adjustment in other clinical populations (e.g., via increased psychological distress and greater health complaints among women diagnosed with breast cancer (Iwamitsu, Shimoda, Abe, & Okawa, 2005; Li et al., 2015; Tamagawa et al., 2013), and greater processing of distressing emotions in community samples (Butler et al., 2003; Richards, Butler, & Gross, 2003). Women with FSIAD who employ greater suppression may too experience more difficulty adjusting to their condition, potentially ruminating more about their sexual problems and experiencing even poorer outcomes as a result.

Recent models conceptualize emotion regulation as an interpersonal system whereby partners' regulation strategies affect each other's experience, behavior, and physiology in a reciprocal fashion (Butler, 2011). Indeed, an individual's emotion regulation has been found to impact their romantic partner's well-being, potentially through changes in their partner's affect (Ben-Naim, Hirschberger, Ein-Dor, & Mikulincer, 2013; Debrot, Schoebi, Perrez, & Horn, 2014). Emotional suppression has been likened to "second-hand smoke" in that suppression adversely affects the psychophysiology of both the suppressor and the partner (e.g., via heightened cardiovascular arousal and negative mood; Ben-Naim et al., 2013). Finally, emotional distance, which is linked to suppression (Butler et al., 2003; Gross, 2002), has been found to be a robust

predictor of depressive symptoms in both members of married couples (Heim & Snyder, 1991).

We are unaware of any research examining the links between emotion regulation strategies employed in sexual situations and couples' adjustment to FSIAD. It is possible that sexual emotion regulation strategies function analogously in FSIAD and community couples; however, several aspects of FSIAD suggest an investigation of reappraisal and suppression in affected couples is warranted. Lower emotional closeness during sex, for example, is linked to women's greater sexual distress (Bancroft et al., 2003), and interpersonal factors, such as open communication (Butler et al., 2003; John & Gross, 2004), are thought to mitigate the negative consequences of women's low desire (Brotto & Laan, 2015). In the context of FSIAD, greater use of emotional suppression in relation to sex could result in less authentic interactions and emotional distance between partners, resulting in lower relationship quality, sexual well-being, and heightened distress. Conversely, as emotional reappraisal has been linked to more optimism, sharing of emotions, and problem-focused coping (Carver, Scheier, & Weintraub, 1989; John & Gross, 2004), greater use of reappraisal when navigating FSIAD could help alleviate couples' distress and result in more favorable relationship and sexual well-being.

Gender Differences in Emotion Regulation and Sexual Desire

Compared to women, men tend to report higher sexual desire (Baumeister, Catanese, & Vohs, 2001; Eplöv, Giralardi, Davidsson, Garde, & Kamper-Jørgensen, 2007; Levine, 2003; but see also Dawson & Chivers, 2014), a greater interest in sex during negative mood states (Lykins, Janssen, & Graham, 2006; Raisanen, Chadwick, Michalak, & van Anders, 2018), and a greater tendency to regulate negative emotion through sex (Hill & Preston, 1996). Men are also more likely to use emotional suppression than women (Gross & John, 2003). In contrast, women report a greater repertoire of emotion regulation strategies (Nolen-Hoeksema & Aldao, 2011) and engage in emotion regulation more for relational concerns compared to men (Timmers, Fischer, & Manstead, 1998). Importantly, women experience lower level of threat when expressing vulnerable information to other women than when disclosing to men (Mendes, Reis, Seery, & Blascovich, 2003). In light of these gender differences, we restricted our sample to individuals in mixed-gender relationships. This approach is in line both with recommendations to consider gender differences in research of emotion (Kret & De Gelder, 2012) and sexual desire (Carvalho & Nobre, 2011; Peplau, 2003), and with methods employed in previous studies of emotion regulation (Bloch et al., 2014; Troy, Wilhelm, Shallcross, & Mauss, 2010).

Objective and Hypotheses

The current study examined whether global difficulties regulating negative emotion, and emotion regulation strategies employed in a sexual context (i.e., suppression and reappraisal), were associated with the psychological (depression, anxiety), relational (satisfaction, dyadic conflict), and sexual (desire, distress) adjustment of couples coping with FSIAD. The outcomes were selected to reflect the broad spectrum of impairments experienced by affected couples (Rosen et al., 2019). With regard to sexual adjustment, we examined sexual desire and distress because these variables represent the core clinical manifestations of FSIAD (Parish & Hahn, 2016) and partners of women with FSIAD report more sexual distress than controls (Rosen et al., 2019). Among women with FSIAD, theory and research suggest there is variation in these variables even at extreme ends of these spectrums (i.e., from absent to low sexual desire and moderate to extreme distress in the case of women with FSIAD; Cherkasskaya & Rosario, 2019). For example, women with combined low desire and arousal report significantly greater sexual distress than women reporting exclusively low desire or exclusively low arousal (Sarin et al., 2016).

We expected that individuals with more effective emotion regulation—as defined by less difficulty regulating their negative emotions, greater use of emotional reappraisal, and lower use of emotional suppression—would report fewer symptoms of anxiety and depression, greater relationship satisfaction, lower dyadic conflict, greater sexual desire, and lower sexual distress than those with poorer emotion regulation. Further, we also predicted that individuals with more effective emotion regulation would have partners who reported greater psychological, relational, and sexual well-being, compared to those with poorer emotion regulation.

Method

Participants

Couples were recruited throughout Canada and the U.S. via flyers, online postings and social media applications, word-of-mouth, and radio/podcast advertisements from September 2016 to May 2018. To be eligible, couples were required to meet the following criteria: 18 years or older; fluent in English; in a committed romantic relationship that had lasted at least 6 months; have had a minimum of four in-person contacts per week with their partner during the last month or cohabitating (to ensure opportunities for sexual activity); and both members of the couples were able and willing to participate. Eligible couples had one member that received a diagnosis consistent with DSM-5 criteria for FSIAD (American Psychiatric Association, 2013), described below under Procedure. Participants

were excluded if they met any of the following criteria: pregnant, breastfeeding, or one year postpartum; undergoing hormonal therapy (hormonal contraceptives were allowed); did not have previous sexual experience (i.e., oral, anal, or vaginal sex, or non-genital sexual touching and mutual masturbation); and the low sexual interest/arousal was attributable to another psychiatric diagnosis, medication, or medical condition. Two hundred and fifteen individuals contacted the laboratory and completed a brief screening call to determine preliminary eligibility. Of the 174 women that were deemed potentially eligible following the screening call, 143 completed the clinical interview and 31 were no longer interested in participating. After completion of the clinical interview, 25 women did not meet the diagnostic criteria for FSIAD (i.e., they either attributed low desire/arousal to another illness, were not significantly distressed, or endorsed less than three symptoms) and were deemed ineligible. Thirty eligible couples were excluded from final analyses due to failed attention checks (i.e., failure to select instructed response items; $n = 15$; 50%), incomplete questionnaires ($n = 6$; 20%), or because they were in a same-gendered relationship ($n = 9$; 30%). The final sample size was 87 couples (174 individuals; see Table 1 for participant characteristics). Only 71 couples completed the measure of emotion regulation strategies because it was added to the study after recruitment began.

Measures

Sociodemographics

Participants reported their gender, sexual orientation, relationship status and duration, education, income, and ethnicity.

Difficulties in Emotion Regulation

Difficulties with emotion regulation were assessed using the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), modified to address psychometric limitations of the original measure (Bardeen, Fergus, Hannan, & Orcutt, 2016). Participants rated 29 items describing how they act when upset (e.g., “When I’m upset, I become out of control”) on a scale from 1 (*almost never*) to 5 (*almost always*). Total scores range from 29 to 145, with higher scores indicating greater difficulty regulating emotions. This measure has shown excellent internal consistency, convergent, and criterion validity (Bardeen et al., 2016). Cronbach’s alphas for the current sample were .97 for women and .96 for partners.

Emotion Regulation Strategies

The Emotion Regulation questionnaire (ERQ; Gross & John, 2003) is a 10-item scale, which assesses individual differences in the use of two emotional regulation strategies: suppression

Table 1 Sociodemographic characteristics for the sample ($N=87$ couples)

Variable	<i>M</i> (range)	<i>N</i>	<i>SD</i>	%
Age (years)				
Women	31.52 (19–57)		7.83	
Men	32.86 (19–70)		9.46	
Education (years)				
Women	16.41 (4–24)		3.22	
Men	16.11 (3–28)		3.88	
Ethnicity				
Women				
Caucasian/White		60		69.0
Asian American/Asian		9		10.3
Other		18		20.7
Men				
Caucasian/White		66		75.9
Asian American/Asian		9		10.3
Other		12		13.8
Relationship status				
Married		40		46.0
Cohabiting		39		44.8
Dating		8		9.2
Relationship length (months)	98.47 (9–419)		87.32	
Women’s low interest/arousal duration (months)	56.91 (6–372)		65.62	

M mean of sample, *N* total number of observations, *SD* standard deviation, % percentage of sample. *Other* Ethnicities included the following: African American/Black, East Indian, Hispanic/Latino/Latina, Middle Eastern/Central Asian, Biracial/Multiracial, Portuguese, Ashkenazic

(4 items; e.g., “I keep my emotions to myself”) and reappraisal (6 items; e.g., “I control my emotions by changing the way I think about the situation I’m in”). Items are rated on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Total scores for the reappraisal subscale range from 6 to 42, with higher scores indicating greater use of emotional reappraisal; total scores for the suppression subscale range from 4 to 28, with higher scores indicating greater use of emotional suppression. The ERQ has demonstrated good validity, internal consistency (Cronbach’s alphas of .79 for reappraisal and .73 for suppression), and test–retest reliability (Gross & John, 2003). In the current study, the instructions were adapted to assess emotion regulation strategies in the context of the sexual relationship (i.e., when thinking or talking about sex or in the context surrounding a sexual experience). Cronbach’s alphas for the reappraisal subscale were .86 for women and .92 for partners, and Cronbach’s alphas for the suppression subscale were .76 for women and .77 for partners.

Depression

The Beck Depression Inventory II (BDI-II) was used to assess the severity of depressive symptoms in participants. Developed by Beck, Steer, and Brown (1996), the BDI-II consists of 21 group statements (e.g., Sadness: 0 = *I do not feel sad*; 1 = *I feel sad much of the time*; 2 = *I am sad all of the time*; 3 = *I am so sad or unhappy that I can’t stand it*) from which participants selected how they had been feeling over the past 2 weeks. Item 9 (suicidal intent) was removed at the request of our ethics board (i.e., because it was not feasible to conduct a thorough risk assessment). Total scores range from 0 to 63, with higher scores indicating greater levels of depression. Cronbach’s alphas for the current sample were .94 for women and .88 for partners.

Anxiety

Anxiety was assessed using a six-item short-form of the trait scale of the State-Trait Anxiety Inventory (STAI; Marteau & Bekker, 1992). Participants rated items on a scale from 1 (*almost never*) to 4 (*almost always*) to indicate how they generally felt (e.g., “I feel pleasant,” “I feel nervous”). Total scores range from 6 to 24, with higher scores indicating greater levels of anxiety. The short-form of the trait scale of the STAI has been shown to have both good reliability and validity (Marteau & Bekker, 1992). Cronbach’s alphas for the current sample were .88 for women and .84 for partners.

Relationship Satisfaction

Relationship satisfaction was assessed with the 16-item version of the Couples Satisfaction Index (CSI; Funk & Rogge, 2007). Using Likert-type scales, participants rated the quality of their relationship across several factors (e.g., how happy they are with their relationship, how frequently they disagree with their partner). Responses are summed to generate a total score for overall relationship satisfaction ranging from 0 to 80 with higher scores indicating greater relationship satisfaction. The CSI has been shown to have strong convergent and construct validity (Funk & Rogge, 2007). Reliability for the current sample was .97 for women and .96 for partners.

Relational Conflict

Conflict within the relationship was assessed with two items from the Revised Dyadic Adjustment Scale (Busby, Christensen, Crane, & Larson, 1995). Using 6-point Likert-type scales, participants indicated how frequently (e.g., 0 = *all the time*, to 5 = *never*) they quarreled with and annoyed their partner. Total scores range from 0 to 10, with higher scores indicating lower levels of relational conflict. Cronbach’s alphas

for the current sample were .80 for women with FSIAD and .79 for partners.

Partner-Focused Sexual Desire

Partner-focused sexual desire was assessed using the Partner-Focused Dyadic Sexual Desire subscale (Moyano, Vallejo-Medina, & Sierra, 2017) of the Sexual Desire Inventory (Spector, Carey, & Steinberg, 1996). Using Likert-type scales, participants rated six items about the strength of their sexual desire for their partner (e.g., 0 = *no desire* to 8 = *strong desire*) and two items on the frequency of a partner-focused sexual thought or desired sexual behavior (e.g., 0 = *not at all* to 7 = *many times a day*). Total scores range from 0 to 54, with higher scores indicating higher levels of partner-focused sexual desire. The partner-focused dyadic sexual desire scale has demonstrated good validity and reliability (Moyano et al., 2017). In the current sample, Cronbach's alphas were .78 for women with FSIAD and .83 for partners.

Sexual Distress

Sexual distress was assessed with the 13-item Female Sexual Distress Scale-Revised (FSDS-R; DeRogatis, Clayton, Lewis-D'Agostino, Wunderlich, & Fu, 2008). Using a 5-point Likert scale, participants indicated how frequently (e.g., 1 = *never*, to 5 = *always*) they experienced distress (e.g., frustration or guilt) related to their sex lives. Total scores range from 13 to 66, with higher scores indicating higher levels of sexual distress. The FSDS-R has demonstrated good discriminant validity and high test–retest reliability (DeRogatis et al., 2008). Originally developed for use in women, the items are gender neutral and the scale has recently been validated in men (Santos-Iglesias, Mohamed, Danko, & Walker, 2018). Cronbach's alphas for the current sample were .91 for women with FSIAD and .91 for partners.

Procedure

Interested women participated in a structured telephone screening interview with a research assistant. Women who met the basic eligibility requirements, and confirmed that both they and their partner were interested in participating in the study, were then scheduled for a semi-structured clinical interview by phone (30–45 min), with a clinical psychologist or senior Ph.D. student in Clinical Psychology, to confirm the FSIAD diagnosis. The clinical interview was developed based on prior studies (e.g., Paterson, Handy, & Brotto, 2016; Sarin et al., 2016) and the clinical expertise of our team. The interview is available for review at the following Open Science Framework (OSF) link: https://osf.io/fb4gu/?view_only=4f6a0638390c4574b02843ad689888dd. Eligible women and their partners were then sent individual links to the online consent form,

and independently completed an online survey comprised of standardized self-report questionnaires. The surveys were hosted on Qualtrics, a secure online survey platform. Participants who did not complete the survey within a week of being sent the link received a reminder phone call from a research assistant. Reminder emails were sent to participants who had not completed the survey at 2 and 3 weeks thereafter. Failure to complete the survey within 4 weeks resulted in removal from the study. Each member of the couple was compensated \$18 CAD in Amazon gift cards for their participation in the study. Couples were also provided information on how to access treatment resources.

Data Analysis

Data analyses were completed using multilevel modeling in SPSS 24.0.0.1. We first examined bivariate correlations between sociodemographics of the sample, emotion regulation (difficulties and strategies), and the study outcomes. To account for the non-independence of the dyadic data, analyses were conducted using multilevel modeling (Kenny, Kashy, & Cook, 2006), in accordance with the actor–partner interdependence model (APIM; Cook & Kenny, 2005). Use of the APIM allowed for an examination of how an individual's emotion regulation was linked to both their own psychological, relational, and sexual well-being (i.e., actor effects) and to their partner's psychological, relational, and sexual well-being (i.e., partner effects). We used a two-level model in which individuals were nested within dyads. Due to the different sample sizes (i.e., to maximize power) and low correlations between the measures of emotion regulation difficulties and strategies, separate APIM models were run for difficulties in emotion regulation and emotion regulation strategies (reappraisal and suppression together). A separate APIM model was conducted for each of the dependent variables. To account for multiple testing and hypotheses with unknown dependencies, we controlled for the false discovery rate (FDR) using the Benjamini, Krieger, and Yekutieli (BKY) adaptive linear step-up procedure (Benjamini, Krieger, & Yekutieli, 2006). The BKY procedure reduces the risk of Type 1 error among a study's significant discoveries by using the *p*-value distribution to calculate adjusted as for each significance test (i.e., *q*-values). Given the need to balance between Type 1 and Type II error in novel areas of research (Fiedler, Kutzner, & Krueger, 2012; Perneger, 1998) and because estimates of the uncorrected science-wide false positive rate range from 14 to 50% (Jager & Leek, 2013; Vidgen & Yasseri, 2016), we employed a FDR of 15% (meaning there will be fewer than 2 false positives if the BKY procedure yields 10 significant results). Correlations between sample characteristics and outcome variables were run using a two-tailed test of significance. As per Frigon and Laurencelle (1993), we used a threshold of $r = .30$ to determine covariates for analysis, since lower values of *r*

Table 2 Descriptives for study measures for women with FSIAD and partners ($N=87$ couples)

Variable	<i>M</i>	Range	<i>SD</i>
Difficulties in emotion regulation			
Women	72.78	(30–141)	26.46
Men	58.30	(30–141)	20.09
Emotional reappraisal ($n=71$)			
Women	27.82	(6–41)	6.79
Men	29.48	(6–42)	7.74
Emotional suppression ($n=71$)			
Women	11.49	(4–25)	5.04
Men	13.76	(4–23)	4.83
Depression			
Women	15.38	(2–51)	11.97
Men	9.98	(0–31)	7.32
Anxiety			
Women	14.91	(6–24)	4.29
Men	11.98	(6–22)	3.60
Relationship satisfaction			
Women	57.80	(15–80)	15.74
Men	60.67	(18–81)	13.07
Dyadic conflict			
Women	6.15	(2–8)	1.41
Men	6.38	(0–9)	1.33
Partner-focused sexual desire			
Women	15.93	(0–36)	7.90
Men	35.18	(6–46)	6.65
Sexual distress			
Women	30.83	(11–50)	9.46
Men	17.39	(0–37)	9.64

M mean of sample, *SD* standard deviation

Table 3 Bivariate correlations between difficulties in emotion regulation and emotion regulation strategies and outcome variables in women with FSIAD and partners

Measure	1	2	3	4	5	6	7	8	9
1. DERS	.26*	-.22	.17	.51**	.43*	-.12	-.12	-.03	.33**
2. RAP	-.20	-.06	.31**	-.24*	-.21	.28*	.15	.14	-.02
3. SUPP	.27*	.30**	.08	.14	.08	-.09	.05	-.15	.15
4. BDI	.56**	-.20	.25*	.25*	.73**	-.38**	-.32**	-.26*	.49**
5. ANX	.53**	-.25*	.23*	.77**	.24*	-.53**	-.34**	-.01	.49**
6. CSI	-.15	-.21	-.38**	-.28**	-.30**	.51**	.59**	.11	-.50**
7. DAS	-.18	.21	.05	-.13	-.24*	.54**	.49**	.07	-.14
8. SDI-D	.05	-.22	-.21	-.07	-.11	.26*	.17	-.14	.13
9. FSIDS	.11	-.04	-.05	.14	.22*	.07	.01	.05	.10

Correlations above the diagonal are for men; correlations below the diagonal are for women with FSIAD; bold correlations on the diagonal are between women with FSIAD and partners. Bivariate correlations in the ranges of .10, .30, and .50 indicate small, medium, and large effects sizes, respectively

DERS Difficulties in Emotion Regulation Scale, *RAP* Adapted Emotion Regulation Questionnaire Reappraisal Subscale, *SUPP* Adapted Emotion Regulation Questionnaire Suppression Subscale, *BDI* Beck Depression Inventory II, *ANX* Trait Scale of the State-Trait Anxiety Inventory, *CSI* Couples Satisfaction Inventory, *DAS* Dyadic Adjustment Scale, *SDI-D* Partner-Focused Dyadic Sexual Desire Subscale of the Sexual Desire Inventory, *FSIDS* Female Sexual Distress Scale—Revised

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

are indicative of poor covariate selection and/or a nonlinear relationship between variables. We found no correlation coefficient for sample characteristics and outcome variables was greater than or equal to $r = .30$; thus, no demographic variables were included as covariates in subsequent analyses.

Results

Descriptives for the study measures are reported in Table 2. Bivariate correlations for emotion regulation and outcome measures are reported in Table 3.

Difficulties in Emotion Regulation and Psychological, Relational, and Sexual Outcomes

As reported in Table 4, when women with FSIAD reported greater difficulties in emotion regulation, they reported greater levels of depression and anxiety. Women’s difficulties in emotion regulation were not associated with their own or men’s relationship satisfaction, dyadic conflict, sexual desire, or sexual distress; nor were they associated with men’s symptoms of depression or anxiety.

When men reported greater difficulties in emotion regulation, they reported greater symptoms of depression and anxiety, more sexual distress, and women with FSIAD reported lower relationship satisfaction. Men’s difficulties in emotion regulation were unrelated to their own relationship satisfaction, dyadic conflict, and sexual desire and to women’s depression, anxiety, dyadic conflict, sexual desire, and sexual distress.

Table 4 Actor–partner interdependence model with difficulties in emotion regulation as the independent variable and all outcomes

	Difficulties in emotion regulation (<i>N</i> = 87)				
	<i>b</i>	SE	<i>df</i>	<i>t</i>	<i>p</i>
Model 1: Depression					
Actor effects					
Women	.24	.04	84	5.78	<.01
Men	.19	.04	84	5.34	<.01
Partner effects					
Women	.05	.06	84	.87	.39
Men	−.01	.03	84	−.36	.72
Model 2: Anxiety					
Actor effects					
Women	.09	.02	84	5.59	<.01
Men	.07	.02	84	4.07	<.01
Partner effects					
Women	.00	.02	84	.02	.98
Men	.01	.01	84	.67	.50
Model 3: Relationship satisfaction					
Actor effects					
Women	−.06	.06	84	−.85	.40
Men	−.07	.07	84	−.99	.32
Partner effects					
Women	−.17	.09	84	−2.01	.048
Men	−.02	.06	84	−.42	.68
Model 4: Dyadic conflict					
Actor effects					
Women	−.01	.01	84	−1.66	.10
Men	−.01	.01	84	−.84	.40
Partner effects					
Women	.00	.01	84	.04	.97
Men	.00	.01	84	−.83	.41
Model 5: Partner-focused sexual desire					
Actor effects					
Women	.03	.03	84	.92	.36
Men	−.01	.04	84	−.27	.79
Partner effects					
Women	−.08	.04	84	−1.80	.08
Men	.00	.03	84	.14	.89
Model 6: Sexual distress					
Actor effects					
Women	.04	.04	84	1.02	.31
Men	.16	.05	84	3.17	<.01
Partner effects					
Women	−.01	.05	84	−.14	.89
Men	−.01	.04	84	−.19	.85

The coefficients reported are unstandardized betas (*b*) and interpreted as the change in the outcome for every one-unit increase in the predictor from the sample mean. Actor effects refer to the association between women's or partners' difficulties in emotion regulation and their own outcomes, whereas partner effects refer to the association between women's or partners' difficulties in emotion regulation and their partners outcomes (e.g., the association between men's greater difficulties and women's lower relationship satisfaction). Significant effects are bolded. All bolded effects achieved FDR < 15%

Emotional Reappraisal and Psychological, Relational, and Sexual Outcomes

Results from the APIMs with emotion regulation strategies employed in a sexual context and study outcomes are reported in Table 5. Women with FSIAD who reported greater use of emotional reappraisal reported fewer symptoms of depression and anxiety, and their partners reported greater relationship satisfaction. Women's emotional reappraisal was not linked to their own relationship satisfaction, dyadic conflict, sexual desire, or sexual distress. Women's reappraisal was also unrelated to their partners' depression, anxiety, relationship satisfaction, sexual desire, and sexual distress.

Men who reported greater emotional reappraisal reported fewer symptoms of depression and anxiety, higher partner-focused sexual desire, higher relationship satisfaction, and lower dyadic conflict, and the women with FSIAD also reported more relationship satisfaction and lower dyadic conflict. There were no associations between men's emotional reappraisal and their own sexual distress or women's depression, anxiety, sexual desire, or sexual distress.

Emotional Suppression and Psychological, Relational, and Sexual Outcomes

As reported in Table 5, the greater use of emotional suppression in sexual contexts by women with FSIAD was associated with their own greater symptoms of depression and anxiety, and lower relationship satisfaction. Women's emotional suppression was not associated with their own dyadic conflict, sexual desire, or sexual distress; nor with their partners' depression, anxiety, relationship satisfaction, dyadic conflict, sexual desire, or sexual distress.

Men's greater use of emotional suppression was associated with their own greater symptoms of depression, lower relationship satisfaction, and lower sexual desire. Men's suppression was unrelated to their own anxiety, dyadic conflict, and sexual distress and to women's depression, anxiety, relationship satisfaction, dyadic conflict, sexual desire, and sexual distress.

Correction for Multiple Testing

Results from our APIM models remained significant at FDR < 15% using the BKJ adaptive linear step-up procedure.

Discussion

This study extends the emotion regulation and FSIAD literatures by demonstrating that emotion regulation abilities and strategies are associated with the adjustment of couples coping with FSIAD. Specifically, results revealed that for women with FSIAD and their male partners, greater difficulties regulating

Table 5 Actor–partner interdependence model with emotion regulation strategies as independent variables and all outcomes

	Emotional reappraisal (<i>n</i> = 71)					Emotional suppression (<i>n</i> = 71)				
	<i>b</i>	SE	<i>df</i>	<i>t</i>	<i>p</i>	<i>b</i>	SE	<i>df</i>	<i>t</i>	<i>p</i>
Model 1: Depression										
Actor effects										
Women	−.56	.20	66	−2.74	.01	.73	.28	66	2.63	.01
Men	−.32	.11	66	−2.84	.01	.37	.18	66	2.00	.049
Partner effects										
Women	.17	.18	66	0.92	.36	−.33	.29	66	−1.15	.26
Men	−.02	.13	66	−0.12	.90	.12	.17	66	0.67	.51
Model 2: Anxiety										
Actor effects										
Women	−.21	.07	66	−2.92	.01	.22	.10	66	2.27	.03
Men	−.12	.06	66	−2.16	.03	.10	.09	66	1.16	.25
Partner effects										
Women	.06	.06	66	1.01	.32	−.05	.10	66	−0.52	.60
Men	.05	.06	66	0.75	.46	.09	.09	66	1.11	.27
Model 3: Relationship satisfaction										
Actor effects										
Women	−.19	.25	66	−0.76	.45	−.99	.33	66	−2.97	<.01
Men	.74	.18	66	4.09	<.01	−.67	.29	66	−2.29	.03
Partner effects										
Women	.53	.22	66	2.39	.02	.18	.35	66	0.50	.62
Men	.33	.20	66	1.64	.11	−.50	.28	66	−1.80	.08
Model 4: Dyadic conflict										
Actor effects										
Women	.03	.03	66	1.13	.26	.01	.03	66	0.34	.73
Men	.05	.02	66	2.83	.01	−.01	.03	66	−0.35	.72
Partner effects										
Women	.07	.02	66	2.87	.01	.01	.04	66	0.24	.81
Men	.05	.02	66	2.35	.02	−.03	.03	66	−1.33	.19
Model 5: Partner-focused sexual desire										
Actor effects										
Women	−0.22	0.15	66.00	−1.51	.14	−0.24	0.20	66.00	−1.23	.22
Men	0.22	0.11	66.00	2.01	.049	−0.52	0.18	66.00	−2.96	<.01
Partner effects										
Women	−0.07	0.13	66.00	−0.56	.57	0.23	0.21	66.00	1.11	.27
Men	−0.13	0.12	66.00	−1.02	.31	0.03	0.17	66.00	0.19	.85
Model 6: Sexual distress										
Actor effects										
Women	−.04	.16	66	−0.24	.81	−.17	.21	66	−0.81	.42
Men	−.07	.16	66	−0.41	.68	.33	.25	66	1.31	.19
Partner effects										
Women	.23	.14	66	1.62	.11	−.03	.22	66	−0.12	.91
Men	.16	.18	66	0.88	.38	.41	.24	66	1.70	.09

The coefficients reported are unstandardized betas (*b*) and interpreted as the change in the outcome for every one-unit increase in the predictor from the sample mean. Actor effects refer to the association between women's or partners' emotion regulation strategies and their own outcomes, whereas partner effects refer to the association between women's or partners' emotion regulation strategies and their partners outcomes (e.g., the association between women's greater reappraisal and men's greater relationship satisfaction). Significant effects are bolded. All bolded effects achieved FDR < 15%

negative emotions were associated with their own greater symptoms of depression and anxiety; men's greater difficulties were linked to their own greater sexual distress and women's lower relationship satisfaction. Further, women with FSIADs and men's greater use of emotional suppression in sexual contexts were linked to their own lower relationship satisfaction and greater symptoms of depression and, for women, their own greater anxiety. Men's higher suppression was also linked to their own lower partner-focused sexual desire. In contrast, women's and men's greater use of emotional reappraisal in sexual contexts was linked to their own lower depression and anxiety and to lower perceived dyadic conflict of their partners. Finally, men's greater use of emotional reappraisal was linked to their own and women's higher relationship satisfaction, as well as their own lower dyadic conflict and higher partner-focused sexual desire.

Psychological Adjustment

Consistent with our predictions, greater difficulty regulating negative emotion was linked to more symptoms of depression and anxiety for both women with FSIAD and their partners. Similarly, women's and men's greater use of suppression specific to sexual contexts (e.g., concealing their emotions during conversations about sex, or during sex itself) was linked to their own greater symptoms of depression and to women's own greater anxiety. These results are in line with theories on difficulties with emotion regulation (Gratz & Roemer, 2004) and prior research (Aldao et al., 2010; Cameron & Overall, 2018), which suggest that poor ability to regulate negative emotions and use of emotional suppression may exacerbate the psychological distress experienced by both members of couples coping with FSIAD. Such findings are again consistent with the robust positive association found in the literature between emotional suppression and depression and anxiety (Aldao et al., 2010; Campbell-Sills, Barlow, Brown, & Hofmann, 2006). As suppression has been linked to rumination (Liverant, Kamholz, Sloan, & Brown, 2011) and emotional detachment (Butler et al., 2003) members of couples coping with FSIAD who suppress their emotions about sex may ruminate more about the sexual problem within their relationship and feel emotionally alienated from their partner, exacerbating their symptoms of depression as a result (Heim & Snyder, 1991). And although one study found that greater suppression in daily life was associated with greater depression over time (Cameron & Overall, 2018), another longitudinal study suggested that depressive symptoms precede the habitual use of suppression (Larsen et al., 2013). Thus, given the cross-sectional nature of the current study, it is also possible that greater symptoms of depression may lead individuals to suppress their emotions about sex as a way of coping with their distress.

In contrast, greater use of emotional reappraisal by women and men in relation to the sexual relationship was linked to their own lower depression and anxiety. It is possible that use of reappraisal helps to alleviate some of the distress associated with FSIAD. For example, a woman with FSIAD may reframe a sexual experience to focus on intimacy with her partner, even if her sexual desire or arousal is low. Indeed, prior research has shown that greater use of reappraisal mitigates the negative emotions provoked by relational conflict (Mauss, Cook, Cheng, & Gross, 2007). It is also possible that when women with FSIAD think about sexual issues in a more positive light they may be more motivated to engage in sexual activity in pursuit of positive outcomes (i.e., approach goals), such as to experience closeness with their partner or to make their partner happy, as greater approach goals have been linked to lower depression in women with other types of sexual dysfunction (e.g., genito-pelvic pain/penetration disorder; Rosen, Dewitte, Merwin, & Bergeron, 2017). Alternatively, women with FSIAD and partners who report lower psychological distress may experience fewer cognitive biases associated with depression and anxiety (Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, & van IJzendoorn, 2007; Gotlib, Krasnoperova, Yue, & Joormann, 2004) and could, therefore, find it easier to reappraise their emotions in a sexual context, compared to those who experience greater symptoms of anxiety and depression.

Relational Adjustment

Women's and men's greater use of emotional suppression in relation to sex was linked to their own lower relationship satisfaction. These findings are consistent with the process model of emotion regulation (Gross, 1998), which posits that emotional suppression is detrimental to relationships because it disrupts signals of interest that are conveyed via expressed emotions, provoking more stressful social interactions (Butler et al., 2003), as well as research showing that emotional suppression was linked to lower relationship satisfaction in daily diary and longitudinal studies of community couples (Impett et al., 2012; Velotti et al., 2016). In FSIAD, couples' use of emotional suppression when navigating sexual issues may convey disinterest or apathy to their partners, heightening relationship stress and leading couples to avoid conversations about the sexual problem. This avoidance could, in turn, lower relationship satisfaction, as has been shown with topic avoidance in couples coping with cancer (Donovan-Kicken & Caughlin, 2010). It is also possible that individuals coping with FSIAD may suppress their emotions about sex with the goal of protecting their partner from distress. However, suppression has been found to have the paradoxical effect of fostering preoccupation with the thoughts that one is seeking to suppress (Wegner, Schneider, Carter, & White, 1987), increasing the intensity of

negative emotions and the likelihood of couple conflict and dissatisfaction (Robertson, Daffern, & Bucks, 2012).

In line with our predictions, men's greater use of emotional reappraisal in sexual contexts was associated with their own greater relationship satisfaction and lower perceptions of dyadic conflict. Prior research has shown that an individual's greater use of emotional reappraisal when discussing problems in their relationship is linked to greater perceptions of constructive criticism (i.e., criticism that is perceived as helpful and amicable; Klein, Renshaw, & Curby, 2016). Because constructive criticism is positively associated with relationship satisfaction (Renshaw, Blais, & Caska, 2010), men who employ more reappraisal in sexual contexts may engage in more constructive communication when navigating FSIAD with their partner, lowering perceptions of conflict and increasing relationship satisfaction as a result.

Notably, several partner effects emerged for relational adjustment. Consistent with research indicating that poor emotion regulation ability interferes with couples' intimacy (Tani, Pascuzzi, & Raffagnino, 2015), men's greater difficulty regulating negative emotion was linked to women's lower relationship satisfaction. This finding suggests that, in the context of FSIAD, men's ability to manage emotion may be important for the relationship, which is counter to Bloch et al. (2014) who found that only wives' emotion regulation during conflict uniquely predicted community couples' marital quality. In addition, an individual's greater tendency to manage their emotions about sex via reappraisal was related to *their partner's* lower dyadic conflict and men's greater reappraisal was linked to women's higher relationship satisfaction. These findings support the growing body of research that suggests managing emotions via reappraisal is beneficial for both partners (Ben-Naim et al., 2013; Finkel, Slotter, Luchies, Walton, & Gross, 2013). Indeed, reappraisal is associated with both partner responsiveness (John & Gross, 2004) and greater empathic concern (López-Pérez & Ambrona, 2015). A member of a FSIAD couple who favors reappraisal, for example, might manage their frustration over a desire discrepancy by reframing the disagreement as an opportunity to empathize with, or respond to, their partner's needs (i.e., to either have sex, or not). Correspondingly, and in line with findings that greater partner responsiveness is linked to greater relationship satisfaction in other sexual dysfunctions (Muise, Bergeron, Impett, & Rosen, 2017), partners of individuals who cope with sexual emotions by reframing their experience may feel more satisfied in their relationship and perceive less conflict because reappraisal promotes a more positive interpersonal context.

Sexual Adjustment

As expected, male partners' greater difficulty regulating negative emotions was related to their own higher sexual distress. Because difficulty regulating negative emotion interferes with goal-directed behavior (Gratz & Tull, 2010), it is possible that partners find their attempts to sexually engage a partner with low interest/arousal and to manage the negative emotions that often accompany a desire discrepancy (Mark, 2015), thwarted by poor emotion regulation abilities. Additionally, men's greater emotional suppression was linked to their own lower sexual desire, whereas greater reappraisal was linked to higher desire. Given that emotional suppression and reappraisal influence emotional closeness (Cameron & Overall, 2018; Velotti et al., 2016), these results converge with findings that men in long-term relationships qualitatively report emotional connection with their partner as a factor which inhibits or elicits their sexual desire (Murray, Milhausen, Graham, & Kuczynski, 2017).

Surprisingly, our results revealed no association between women's emotion regulation and their own or their partner's sexual desire or distress, or between men's emotion regulation strategies and women's sexual well-being. This finding is unexpected given that Rellini et al. (2012) found a link between women's greater difficulty regulating negative emotion and sexual dissatisfaction, a construct which is closely related to sexual distress (Stephenson & Meston, 2010). It is possible that the lack of effects for women could be due to the limited range of sexual distress and desire in our sample. Emotion regulation may be linked to facets of sexual well-being for women with FSIAD that were not assessed in the current study, such as orgasm frequency (Burri, Cherkas, & Spector, 2009), sexual communication, or sexual compatibility. It is also possible that couples affected by FSIAD use emotion regulation strategies for sexual contexts which were not assessed in the current study, such as acceptance, aggressive externalization, perspective taking, or problem solving (Aldao et al., 2010; Vater & Schröder-Abé, 2015). For example, prior research suggests that distraction—the emotion regulation strategy of shifting attention away from emotionally provoking stimuli—is employed more often than emotional reappraisal in situations of high versus low emotional intensity (Sheppes, Scheibe, Suri, & Gross, 2011). Finally, the selection of an emotion regulation strategy is influenced by contextual, emotional, and motivational factors (Sheppes et al., 2014). Collapsing emotion regulation strategies employed across all sexual contexts—as we did in this study—may have obscured effects for sexual adjustment because people could select different strategies depending on the situation (e.g., when engaged in sexual activity versus conversations or thoughts about sex). In summary, future research should assess broader components of participants' sexual well-being, additional emotion regulation strategies in

FSIAD, and emotion regulation strategies employed in specific sexual contexts (e.g., during sexual activity) separately.

Strengths and Limitations

This was the first study, to our knowledge, to demonstrate that emotion regulation is associated with women's and partners' adjustment to FSIAD, answering calls for research on emotion regulation in intimate relationships (Gross, 2015; Rellini et al., 2010). Although rare in prior research, the inclusion of partners in our study is noteworthy because FSIAD typically occurs in the context of a romantic relationship (Parish & Hahn, 2016), and women with low sexual desire who are in relationships are more likely to experience negative symptoms, such as sexual distress (Rosen et al., 2009).

The study has limitations, which should also be noted. First, the study's cross-sectional design limits our ability to make causal interpretations. Second, given that partner willingness to participate has been theorized to exclude more distressed couples in dyadic studies of sexual dysfunction (Corsini-Munt, Rancourt, Dubé, Rossi, & Rosen, 2017), our eligibility requirements may have biased our sample to include less distressed participants and/or those who are regulating their emotions more effectively. Third, the retrospective nature of questions assessing emotion regulation strategies may not have accurately captured strategies employed in vivo. Objective measures of emotion regulation, such as observational and physiological measures, will enable researchers to capture emotion regulation as it happens, rather than relying upon participants' retrospective recall, and should be incorporated into future studies. Fourth, the clinicians who interviewed potential participants were aware of the study's hypotheses; this knowledge may have influenced the provision of diagnoses. Fifth, because trait emotional suppression and reappraisal were not assessed, we are unable to determine whether associations between strategy use and study outcomes are unique to sexual versus general situations. However, other studies have demonstrated the unique contribution of cognitive-affective factors specific to sexuality (e.g., sexual communication, sexual beliefs) beyond general measures of these constructs (Glowacka, Vannier, & Rosen, 2020; Impett, Peplau, & Gable, 2005; Maxwell et al., 2017; Rancourt, Flynn, & Rosen, 2020). Finally, our sample was comprised of individuals in mixed-gendered relationships which limits the generalizability of our findings.

Conclusions

Overall, our findings suggest that emotion regulation among couples with FSIAD may be linked more to indicators of their distress (e.g., symptoms of anxiety and depression, dyadic conflict, and relational dissatisfaction) than their enhanced

well-being (e.g., better relational and sexual well-being). Although unanticipated, this pattern of results is consistent with previous research indicating that less adaptive emotion regulation strategies have stronger associations with psychopathology than adaptive strategies (Aldao & Nolen-Hoeksema, 2012; Aldao et al., 2010). This trend can be attributed, in part, to differences in how emotion regulation strategies are implemented. Whereas poor adjustment is linked to rigid implementation of less adaptive strategies, such as suppression, better adjustment is linked to the flexible implementation of multiple adaptive strategies (Aldao & Nolen-Hoeksema, 2012). It is therefore possible that couples with FSIAD who tend to adapt better to the condition (as reflected by greater well-being) may flexibly implement a range of adaptive strategies to manage their emotions about sex that were not assessed by the current study (e.g., acceptance and problem solving). These additional strategies should be assessed in future research. The general pattern of results also suggests that an individual's emotion regulation was more important for their own adjustment as it was unrelated to their *partner's* adjustment for couples' psychological and sexual well-being, perhaps reflecting the internalized nature of depression and anxiety (Krueger & Markon, 2006) and women's and men's unique experience of FSIAD and sexual desire (Carvalho & Nobre, 2011; Rosen et al., 2019).

In conclusion, findings support past and present recommendations that partners be included in treatment for sexual problems, including FSIAD (Masters & Johnson, 1970; Rosen, Rancourt, Bergeron, & Corsini-Munt, 2014), although empirically supported couple-based treatments for FSIAD still do not exist. Clinicians might target enhancing emotion regulation skills and adaptive strategies in couples affected by FSIAD, with the aim of helping couples to better regulate emotion via cognitive, affective, and behavioral strategies. Couples who are better able to manage their negative emotions, both globally and in sexual contexts via greater use of cognitive reappraisal and less emotional suppression, may adjust better to FSIAD and experience fewer negative consequences as a result.

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Compliance with Ethical Standards

Conflict of interest The authors have no conflicts of interest.

Human and Animal Rights and Informed Consent All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

References

- Abdo, C. H., Valadares, A. L., Oliveira, W. M., Jr., Scanavino, M. T., & Afif-Abdo, J. (2010). Hypoactive sexual desire disorder in a population-based study of Brazilian women: Associated factors classified according to their importance. *Menopause, 17*, 1114–1121.
- Aldao, A., & Nolen-Hoeksema, S. (2012). The influence of context on the implementation of adaptive emotion regulation strategies. *Behaviour Research and Therapy, 50*, 493–501.
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*, 217–237.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Publishing.
- Bancroft, J., Loftus, J., & Long, J. S. (2003). Distress about sex: A national survey of women in heterosexual relationships. *Archives of Sexual Behavior, 32*, 193–208.
- Bar-Haim, Y., Lamy, D., Pergamin, L., Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2007). Threat-related attentional bias in anxious and nonanxious individuals: A meta-analytic study. *Psychological Bulletin, 133*, 1–24.
- Bardeen, J. R., Fergus, T. A., Hannan, S. M., & Orcutt, H. K. (2016). Addressing psychometric limitations of the Difficulties in Emotion Regulation scale through item modification. *Journal of Personality Assessment, 98*, 298–309.
- Baumeister, R. F., Catanese, K. R., & Vohs, K. D. (2001). Is there a gender difference in strength of sex drive? Theoretical views, conceptual distinctions, and a review of relevant evidence. *Personality and Social Psychology Review, 5*, 242–273.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *BDI-II, Beck depression inventory: Manual* (2nd ed.). Boston: Harcourt, Brace, and Company.
- Ben-Naim, S., Hirschberger, G., Ein-Dor, T., & Mikulincer, M. (2013). An experimental study of emotion regulation during relationship conflict interactions: The moderating role of attachment orientations. *Emotion, 13*, 506–519.
- Benjamini, Y., Krieger, A. M., & Yekutieli, D. (2006). Adaptive linear step-up procedures that control the false discovery rate. *Biometrika, 93*, 491–507.
- Bloch, L., Haase, C. M., & Levenson, R. W. (2014). Emotion regulation predicts marital satisfaction: More than a wives' tale. *Emotion, 14*, 130–144. <https://doi.org/10.1037/a0034272>.
- Brotto, L. A., & Laan, E. (2015). Problems of sexual desire and arousal in women. *ABC of Sexual Health, 259*, 59.
- Burri, A. V., Cherkas, L. M., & Spector, T. D. (2009). Emotional intelligence and its association with orgasmic frequency in women. *Journal of Sexual Medicine, 6*, 1930–1937.
- Busby, D. M., Christensen, C., Crane, D. R., & Larson, J. H. (1995). A revision of the Dyadic Adjustment Scale for use with distressed and nondistressed couples: Construct hierarchy and multidimensional scales. *Journal of Marital and Family Therapy, 21*, 289–308.
- Butler, E. A. (2011). Temporal interpersonal emotion systems: The “ties” that form relationships. *Personality and Social Psychology Review, 15*, 367–393.
- Butler, E. A., Egloff, B., Wilhelm, F. H., Smith, N. C., Erickson, E. A., & Gross, J. J. (2003). The social consequences of expressive suppression. *Emotion, 3*, 48–67.
- Cameron, L. D., & Overall, N. C. (2018). Suppression and expression as distinct emotion-regulation processes in daily interactions: Longitudinal and meta-analyses. *Emotion, 18*, 465–480. <https://doi.org/10.1037/emo0000334>.
- Campbell-Sills, L., Barlow, D. H., Brown, T. A., & Hofmann, S. G. (2006). Acceptability and suppression of negative emotion in anxiety and mood disorders. *Emotion, 6*, 587–595.
- Carvalho, J., & Nobre, P. (2011). Gender differences in sexual desire: How do emotional and relationship factors determine sexual desire according to gender? *Sexologies, 20*, 207–211.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*, 267–283.
- Cherkasskaya, E., & Rosario, M. (2019). The relational and bodily experiences theory of sexual desire in women. *Archives of Sexual Behavior, 48*, 1659–1681. <https://doi.org/10.1007/s10508-018-1212-9>.
- Chervonsky, E., & Hunt, C. (2017). Suppression and expression of emotion in social and interpersonal outcomes: A meta-analysis. *Emotion, 17*, 669–683.
- Cook, W. L., & Kenny, D. A. (2005). The actor–partner interdependence model: A model of bidirectional effects in developmental studies. *International Journal of Behavioral Development, 29*, 101–109.
- Corsini-Munt, S., Rancourt, K. M., Dubé, J. P., Rossi, M. A., & Rosen, N. O. (2017). Vulvodynia: A consideration of clinical and methodological research challenges and recommended solutions. *Journal of Pain Research, 10*, 2425–2436.
- Dawson, S. J., & Chivers, M. L. (2014). Gender differences and similarities in sexual desire. *Current Sexual Health Reports, 6*, 211–219.
- Debrot, A., Schoebi, D., Perrez, M., & Horn, A. B. (2014). Stroking your beloved one's white bear: Responsive touch by the romantic partner buffers the negative effect of thought suppression on daily mood. *Journal of Social and Clinical Psychology, 33*, 75–97.
- DePesa, N. S., & Cassisi, J. E. (2017). Affective and autonomic responses to erotic images: Evidence of disgust-based mechanisms in female sexual interest/arousal disorder. *Journal of Sex Research, 54*, 877–886.
- DeRogatis, L., Clayton, A., Lewis-D'Agostino, D., Wunderlich, G., & Fu, Y. (2008). Validation of the Female Sexual Distress Scale-Revised for assessing distress in women with hypoactive sexual desire disorder. *Journal of Sexual Medicine, 5*, 357–364.
- Donovan-Kicken, E., & Caughlin, J. P. (2010). A multiple goals perspective on topic avoidance and relationship satisfaction in the context of breast cancer. *Communication Monographs, 77*, 231–256.
- Doolan, E. L., Bryant, R. A., Liddell, B. J., & Nickerson, A. (2017). The conceptualization of emotion regulation difficulties, and its association with posttraumatic stress symptoms in traumatized refugees. *Journal of Anxiety Disorders, 50*, 7–14.
- Eplöv, L., Girdaldi, A., Davidsen, M., Garde, K., & Kamper-Jorgensen, F. (2007). Sexual desire in a nationally representative Danish population. *Journal of Sexual Medicine, 4*, 47–56.
- Fiedler, K., Kutzner, F., & Krueger, J. I. (2012). The long way from α -error control to validity proper: Problems with a short-sighted false-positive debate. *Perspectives on Psychological Science, 7*, 661–669.
- Finkel, E. J., Slotter, E. B., Luchies, L. B., Walton, G. M., & Gross, J. J. (2013). A brief intervention to promote conflict reappraisal preserves marital quality over time. *Psychological Science, 24*, 1595–1601. <https://doi.org/10.1177/0956797612474938>.

- Frigon, J. Y., & Laurencelle, L. (1993). Analysis of covariance: A proposed algorithm. *Educational and Psychological Measurement*, *53*, 1–18.
- 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. <https://doi.org/10.1037/0893-3200.21.4.572>.
- Glowacka, M., Vannier, S. A., & Rosen, N. O. (2020). Sexual contingent self-worth scale. In R. R. Milhausen, J. K. Sakaluk, T. D. Fisher, C. M. Davis, & W. L. Yarber (Eds.), *Handbook of sexuality-related measures* (4th ed., pp. 537–539). New York: Routledge.
- Gotlib, I. H., Krasnoperova, E., Yue, D. N., & Joormann, J. (2004). Attentional biases for negative interpersonal stimuli in clinical depression. *Journal of Abnormal Psychology*, *113*, 121–135.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation scale. *Journal of Psychopathology and Behavioral Assessment*, *26*, 41–54.
- Gratz, K. L., & Tull, M. T. (2010). Emotion regulation as a mechanism of change in acceptance- and mindfulness-based treatments. In R. Baer (Ed.), *Assessing mindfulness and acceptance processes in clients: Illuminating the theory and practice of change* (pp. 107–133). Oakland, CA: New Harbinger Publications.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, *2*, 271–299.
- Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, *39*, 281–291.
- Gross, J. J. (2014). *Handbook of emotion regulation* (2nd ed.). New York: The Guilford Press.
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, *26*, 1–26.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*, 348–362.
- Heim, S. C., & Snyder, D. K. (1991). Predicting depression from marital distress and attributional processes. *Journal of Marital Family Therapy*, *17*, 67–72.
- Hill, C. A., & Preston, L. K. (1996). Individual differences in the experience of sexual motivation: Theory and measurement of dispositional sexual motives. *Journal of Sex Research*, *33*, 27–45.
- Hofmann, S. G. (2014). Interpersonal emotion regulation model of mood and anxiety disorders. *Cognitive Therapy and Research*, *38*, 483–492.
- Impett, E. A., Kogan, A., English, T., John, O., Oveis, C., Gordon, A. M., & Keltner, D. (2012). Suppression sours sacrifice: Emotional and relational costs of suppressing emotions in romantic relationships. *Personality and Social Psychology Bulletin*, *38*, 707–720.
- Impett, E. A., Peplau, L. A., & Gable, S. L. (2005). Approach and avoidance sexual motives: Implications for personal and interpersonal well-being. *Personal Relationships*, *12*, 465–482.
- Iwamitsu, Y., Shimoda, K., Abe, H., & Okawa, M. (2005). Anxiety, emotional suppression, and psychological distress before and after breast cancer diagnosis. *Psychosomatics*, *46*, 19–24.
- Jager, L. R., & Leek, J. T. (2013). An estimate of the science-wise false discovery rate and application to the top medical literature. *Biostatistics*, *15*, 1–12.
- John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality*, *72*, 1301–1334.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York: Guilford Press.
- Kingsberg, S. A. (2014). Attitudinal survey of women living with low sexual desire. *Journal of Women's Health*, *23*, 817–823.
- Klein, S. R., Renshaw, K. D., & Curby, T. W. (2016). Emotion regulation and perceptions of hostile and constructive criticism in romantic relationships. *Behavior Therapy*, *47*, 143–154.
- Krapf, J. M., Buster, J. E., & Goldstein, A. T. (2016). Management of hypoactive sexual desire disorder (HSDD). In L. I. Lipshultz, A. W. Pastuszak, A. T. Goldstein, A. Giraldi, & M. A. Perelman (Eds.), *Management of sexual dysfunction in men and women* (pp. 233–249). Berlin: Springer.
- Kret, M. E., & De Gelder, B. (2012). A review on sex differences in processing emotional signals. *Neuropsychologia*, *50*, 1211–1221.
- Krueger, R. F., & Markon, K. E. (2006). Reinterpreting comorbidity: A model-based approach to understanding and classifying psychopathology. *Annual Review of Clinical Psychology*, *2*, 111–133.
- Larsen, J. K., Vermulst, A. A., Geenen, R., Van Middendorp, H., English, T., Gross, J. J., & Engels, R. C. (2013). Emotion regulation in adolescence: A prospective study of expressive suppression and depressive symptoms. *Journal of Early Adolescence*, *33*, 184–200.
- Laumann, E. O., Nicolosi, A., Glasser, D. B., Paik, A., Gingell, C., Moreira, E., & Wang, T. (2005). Sexual problems among women and men aged 40–80 years: Prevalence and correlates identified in the global study of sexual attitudes and behaviors. *International Journal of Impotence Research*, *17*, 39–57.
- Laumann, E. O., Paik, A., & Rosen, R. C. (1999). Sexual dysfunction in the United States—Prevalence and predictors. *Journal of the American Medical Association*, *281*, 537–544. <https://doi.org/10.1001/jama.281.6.537>.
- Levine, S. B. (2003). The nature of sexual desire: A clinician's perspective. *Archives of Sexual Behavior*, *32*, 279–285.
- Liverant, G. I., Kamholz, B. W., Sloan, D. M., & Brown, T. A. (2011). Rumination in clinical depression: A type of emotional suppression? *Cognitive Therapy and Research*, *35*, 253–265.
- Li, L., Yang, Y., He, J., Yi, J., Wang, Y., Zhang, J., & Zhu, X. (2015). Emotional suppression and depressive symptoms in women newly diagnosed with early breast cancer. *BMC Women's Health*, *15*, 91.
- López-Pérez, B., & Ambrona, T. (2015). The role of cognitive emotion regulation on the vicarious emotional response. *Motivation and Emotion*, *39*, 299–308.
- Lutz, J., Gross, R. T., & Vargovich, A. M. (2018). Difficulties in emotion regulation and chronic pain-related disability and opioid misuse. *Addictive Behaviors*, *87*, 200–205.
- Lykins, A. D., Janssen, E., & Graham, C. A. (2006). The relationship between negative mood and sexuality in heterosexual college women and men. *Journal of Sex Research*, *43*, 136–143.
- Madioni, F., & Mammana, L. A. (2001). Toronto Alexithymia scale in outpatients with sexual disorders. *Psychopathology*, *34*, 95–98.
- Mark, K. P. (2015). Sexual desire discrepancy. *Current Sexual Health Reports*, *7*, 198–202.
- Marteau, T. M., & Bekker, H. (1992). The development of a six-item short-form of the state scale of the Spielberger State—Trait Anxiety Inventory (STAI). *British Journal of Clinical Psychology*, *31*, 301–306.
- Masters, W. H., & Johnson, V. E. (1970). *Human sexual inadequacy* (1st ed.). Boston: Little, Brown.
- Mauss, I. B., Cook, C. L., Cheng, J. Y., & Gross, J. J. (2007). Individual differences in cognitive reappraisal: Experiential and physiological responses to an anger provocation. *International Journal of Psychophysiology*, *66*, 116–124.
- Maxwell, J. A., Muise, A., MacDonald, G., Day, L. C., Rosen, N. O., & Impett, E. A. (2017). How implicit theories of sexuality shape sexual and relationship well-being. *Journal of Personality and Social Psychology*, *112*, 238–279.
- Mendes, W. B., Reis, H. T., Seery, M. D., & Blascovich, J. (2003). Cardiovascular correlates of emotional expression and suppression:

- Do content and gender context matter? *Journal of Personality and Social Psychology*, 84, 771–792.
- Mitchell, K. R., Jones, K. G., Wellings, K., Johnson, A. M., Graham, C. A., Datta, J., & Macdowall, W. (2016). Estimating the prevalence of sexual function problems: The impact of morbidity criteria. *Journal of Sex Research*, 53, 955–967.
- Moyano, N., Vallejo-Medina, P., & Sierra, J. C. (2017). Sexual Desire Inventory: Two or three dimensions? *Journal of Sex Research*, 54, 105–116.
- Muise, A., Bergeron, S., Impett, E. A., & Rosen, N. O. (2017). The costs and benefits of sexual communal motivation for couples coping with vulvodynia. *Health Psychology*, 36, 819–823. <https://doi.org/10.1037/hea0000470>.
- Murray, S. H., Milhausen, R. R., Graham, C. A., & Kuczynski, L. (2017). A qualitative exploration of factors that affect sexual desire among men aged 30–65 in long-term relationships. *Journal of Sex Research*, 54, 319–330.
- Nobre, P. J., & Pinto-Gouveia, J. (2006). Emotions during sexual activity: Differences between sexually functional and dysfunctional men and women. *Archives of Sexual Behavior*, 35, 491–499.
- Nobre, P. J., & Pinto-Gouveia, J. (2008). Cognitions, emotions, and sexual response: Analysis of the relationship among automatic thoughts, emotional responses, and sexual arousal. *Archives of Sexual Behavior*, 37, 652–661.
- Nolen-Hoeksema, S., & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Personality and Individual Differences*, 51, 704–708.
- Parish, S. J., & Hahn, S. R. (2016). Hypoactive sexual desire disorder: A review of epidemiology, biopsychology, diagnosis, and treatment. *Sexual Medicine Reviews*, 4, 103–120.
- Paterson, L. Q. P., Handy, A. B., & Brotto, L. A. (2016). A pilot study of eight-session mindfulness-based cognitive therapy adapted for women's sexual interest/arousal disorder. *Journal of Sex Research*, 54(7), 850–861. <https://doi.org/10.1080/00224499.2016.1208800>.
- Peplau, L. A. (2003). Human sexuality: How do men and women differ? *Current Directions in Psychological Science*, 12, 37–40.
- Perneger, T. V. (1998). What's wrong with Bonferroni adjustments. *British Medical Journal*, 316, 1236–1238.
- Raisanen, J. C., Chadwick, S. B., Michalak, N., & van Anders, S. M. (2018). Average associations between sexual desire, testosterone, and stress in women and men over time. *Archives of Sexual Behavior*, 47, 1613–1631.
- Rancourt, K., Flynn, M., & Rosen, N. O. (2020). Sexual communication patterns scale. In R. R. Milhausen, J. K. Sakaluk, T. D. Fisher, C. M. Davis, & W. L. Yarber (Eds.), *Handbook of sexuality-related measures* (4th ed., pp. 235–237). New York: Routledge.
- Rehman, U., Lizdek, I., Fallis, E., Sutherland, S., & Goodnight, J. (2017). How is sexual communication different from nonsexual communication? A moment-by-moment analysis of discussions between romantic partners. *Archives of Sexual Behavior*, 46, 2339–2352.
- Rellini, A. H., Vujanovic, A. A., Gilbert, M., & Zvolensky, M. J. (2012). Childhood maltreatment and difficulties in emotion regulation: Associations with sexual and relationship satisfaction among young adult women. *Journal of Sex Research*, 49, 434–442.
- Rellini, A. H., Vujanovic, A. A., & Zvolensky, M. J. (2010). Emotional dysregulation: Concurrent relation to sexual problems among trauma-exposed adult cigarette smokers. *Journal of Sex and Marital Therapy*, 36, 137–153. <https://doi.org/10.1080/00926230903554545>.
- Renshaw, K. D., Blais, R. K., & Caska, C. M. (2010). Distinctions between hostile and nonhostile forms of perceived criticism from others. *Behavior Therapy*, 41, 364–374.
- Richards, J. M., Butler, E. A., & Gross, J. J. (2003). Emotion regulation in romantic relationships: The cognitive consequences of concealing feelings. *Journal of Social and Personal Relationships*, 20, 599–620.
- Robertson, T., Daffern, M., & Bucks, R. S. (2012). Emotion regulation and aggression. *Aggression and Violent Behavior*, 17, 72–82.
- Rosen, N. O., & Bergeron, S. (2019). Genito-pelvic pain through a dyadic lens: Moving toward an interpersonal emotion regulation model of women's sexual dysfunction. *Journal of Sex Research*, 56(4–5), 440–461.
- Rosen, N., Dewitte, M., Merwin, K., & Bergeron, S. (2017). Interpersonal goals and well-being in couples coping with genito-pelvic pain. *Archives of Sexual Behavior*, 46, 2007–2019.
- Rosen, N. O., Dubé, J. P., Corsini-Munt, S., & Muise, A. (2019). Partners experience consequences, too: A comparison of the sexual, relational, and psychological adjustment of women with sexual interest/arousal disorder and their partners to control couples. *Journal of Sexual Medicine*, 16, 83–95.
- Rosen, N. O., Rancourt, K., Bergeron, S., & Corsini-Munt, S. (2014). Beyond a “woman's problem”: The role of relationship processes in genital pain. *Current Sexual Health Reports*, 6, 1–10. <https://doi.org/10.1007/s11930-013-0006-2>.
- Rosen, R. C., Shifren, J. L., Monz, B. U., Odom, D. M., Russo, P. A., & Johannes, C. B. (2009). Correlates of sexually related personal distress in women with low sexual desire. *Journal of Sexual Medicine*, 6, 1549–1560.
- Santos-Iglesias, P., Mohamed, B., Danko, A., & Walker, L. M. (2018). Psychometric validation of the Female Sexual Distress scale in male samples. *Archives of Sexual Behavior*, 47, 1733–1743.
- Sarin, S., Amsel, R., & Binik, Y. M. (2016). A streetcar named “derousal”? A psychophysiological examination of the desire–arousal distinction in sexually functional and dysfunctional women. *Journal of Sex Research*, 53, 711–729.
- Sheppes, G., Scheibe, S., Suri, G., & Gross, J. J. (2011). Emotion-regulation choice. *Psychological Science*, 22, 1391–1396.
- Sheppes, G., Scheibe, S., Suri, G., Radu, P., Blechert, J., & Gross, J. J. (2014). Emotion regulation choice: A conceptual framework and supporting evidence. *Journal of Experimental Psychology: General*, 143, 163–181.
- Spector, I. P., Carey, M. P., & Steinberg, L. (1996). The Sexual Desire Inventory: Development, factor structure, and evidence of reliability. *Journal of Sex and Marital Therapy*, 22, 175–190.
- Stephenson, K. R., & Meston, C. M. (2010). Differentiating components of sexual well-being in women: Are sexual satisfaction and sexual distress independent constructs? *Journal of Sexual Medicine*, 7, 2458–2468.
- Swart, M., Kortekaas, R., & Aleman, A. (2009). Dealing with feelings: Characterization of trait alexithymia on emotion regulation strategies and cognitive-emotional processing. *PLoS ONE*, 4(6), e5751. <https://doi.org/10.1371/journal.pone.0005751>.
- Tamagawa, R., Giese-Davis, J., Specia, M., Doll, R., Stephen, J., & Carlson, L. E. (2013). Trait mindfulness, repression, suppression, and self-reported mood and stress symptoms among women with breast cancer. *Journal of Clinical Psychology*, 69, 264–277.
- Tani, F., Pascuzzi, D., & Raffagnino, R. (2015). Emotion regulation and quality of close relationship: The effects of emotion dysregulation processes on couple intimacy. *BPA-Applied Psychology Bulletin (Bollettino di Psicologia Applicata)*, 63, 272.
- Timmers, M., Fischer, A. H., & Manstead, A. S. (1998). Gender differences in motives for regulating emotions. *Personality and Social Psychology Bulletin*, 24, 974–985.
- Troy, A. S., Wilhelm, F. H., Shallcross, A. J., & Mauss, I. B. (2010). Seeing the silver lining: Cognitive reappraisal ability moderates the relationship between stress and depressive symptoms. *Emotion*, 10, 783–795.
- Trudel, G., Aubin, S., & Matte, B. (1995). Sexual behaviors and pleasure in couples with hypoactive sexual desire. *Journal of Sex Education and Therapy*, 21, 210–216.

- Trudel, G., Boulos, L., & Matte, B. (1993). Dyadic adjustment in couples with hypoactive sexual desire. *Journal of Sex Education and Therapy, 19*, 31–36.
- Vater, A., & Schröder-Abé, M. (2015). Explaining the link between personality and relationship satisfaction: Emotion regulation and interpersonal behaviour in conflict discussions. *European Journal of Personality, 29*, 201–215.
- Velotti, P., Balzarotti, S., Tagliabue, S., English, T., Zavattini, G. C., & Gross, J. J. (2016). Emotional suppression in early marriage: Actor, partner, and similarity effects on marital quality. *Journal of Social and Personal Relationships, 33*, 277–302.
- Vidgen, B., & Yasseri, T. (2016). *p* values: Misunderstood and misused. *Frontiers in Physics, 4*, 6. <https://doi.org/10.3389/fphy.2016.00006>.
- Wegner, D. M., Schneider, D. J., Carter, S. R., & White, T. L. (1987). Paradoxical effects of thought suppression. *Journal of Personality and Social Psychology, 53*, 5–13.
- Wise, T., Osborne, C., Strand, J., Fagan, P., & Schmidt, C., Jr. (2002). Alexithymia in patients attending a sexual disorders clinic. *Journal of Sex and Marital Therapy, 28*, 445–450.

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