



Navigating Women's Low Desire: Sexual Growth and Destiny Beliefs and Couples' Well-Being

Stephanie Raposo, Natalie O. Rosen, Serena Corsini-Munt, Jessica A. Maxwell & Amy Muise

To cite this article: Stephanie Raposo, Natalie O. Rosen, Serena Corsini-Munt, Jessica A. Maxwell & Amy Muise (2021) Navigating Women's Low Desire: Sexual Growth and Destiny Beliefs and Couples' Well-Being, *The Journal of Sex Research*, 58:9, 1118-1129, DOI: [10.1080/00224499.2021.1884179](https://doi.org/10.1080/00224499.2021.1884179)

To link to this article: <https://doi.org/10.1080/00224499.2021.1884179>



Published online: 03 Mar 2021.



[Submit your article to this journal](#)



Article views: 253



[View related articles](#)



[View Crossmark data](#)

Navigating Women's Low Desire: Sexual Growth and Destiny Beliefs and Couples' Well-Being

Stephanie Raposo^a, Natalie O. Rosen^b, Serena Corsini-Munt^c, Jessica A. Maxwell^d, and Amy Muise^a

^aDepartment of Psychology, York University; ^bDepartments of Psychology & Neuroscience, and Obstetrics & Gynaecology, Dalhousie University; ^cSchool of Psychology, University of Ottawa; ^dSchool of Psychology, University of Auckland

ABSTRACT

People's beliefs about how to maintain sexual satisfaction have been associated with how they navigate sexual differences, but research has yet to explore the consequences of these beliefs for couples facing a distressing sexual issue. The current research extends past work on sexual growth beliefs (i.e., the view that sexual satisfaction requires continuous effort to maintain) and sexual destiny beliefs (i.e., the view that sexual satisfaction is the result of natural sexual compatibility with a partner) to couples for whom these beliefs might be especially consequential – those coping with sexual dysfunction. In a dyadic longitudinal study of 97 couples coping with women's clinically significant low desire and arousal, we tested how sexual growth and destiny beliefs are associated with sexual, relationship, and personal well-being. We found that endorsing greater sexual growth beliefs was associated with higher sexual desire for both partners, whereas, with some exceptions, endorsing greater sexual destiny beliefs was linked to lower sexual desire and relationship satisfaction, more conflict, and more depressive and anxious symptoms. However, these effects did not persist one year later. Our findings highlight the implications of sexual growth and destiny beliefs for both couple members when navigating a chronic sexual difficulty.

Sexual desire tends to be high in the initial stages of a relationship when partners are getting acquainted and sharing many new experiences (Baumeister & Bratslavsky, 1999), but with time as a relationship stabilizes, many couples face precipitous declines in their desire (McNulty et al., 2019; Muise et al., 2016). Sexual satisfaction similarly tends to decline over time (McNulty et al., 2016), even beginning after the first year of the relationship (Schmiedeborg & Schröder, 2016). A framework that has advanced our understanding of how aspects of sexuality change over time in relationships are theories of implicit sexual beliefs – different beliefs about how sexual satisfaction can be maintained in relationships and what declines in desire or sexual satisfaction signal about the quality of the relationship (Bohns et al., 2015; Bóthe et al., 2017; Maxwell et al., 2017; Sutherland & Rehman, 2018). Specifically, there are two types of implicit beliefs about the maintenance of sexual satisfaction in relationships: people who hold *sexual growth beliefs* view sexual satisfaction as requiring continuous effort to maintain, whereas people who endorse *sexual destiny beliefs* view sexual satisfaction as the result of natural sexual compatibility with a partner (Maxwell et al., 2017).

Given that sexual growth and destiny beliefs are associated with how couples navigate differences in their sexual relationship (Maxwell et al., 2017), these beliefs might be particularly consequential when couples are coping with the women's distressing sexual dysfunction. In the current research, we drew on theories of implicit sexual beliefs (see Maxwell et al., 2017) to investigate novel questions about how people's sexual growth and destiny beliefs are associated with both partners'

sexual, relationship, and personal well-being when couples are coping with the women's clinically low sexual desire.

Implications of Low Sexual Desire for Well-Being

Many people experience declines in sexual desire over time, but some report persistent low sexual desire that is clinically relevant when accompanied by distress. Low sexual desire is the highest-reported sexual issue among women (Graziottin, 2007; Mitchell et al., 2009) and one of the most common reasons for seeking couple therapy (Doss et al., 2004). An estimated 39% of women report low desire – 30% of whom also report significant distress (Rosen et al., 2009), and an estimated 0.6% of women meet criteria for Female Sexual Interest/Arousal Disorder (FSIAD; according to the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders; American Psychiatric Association, 2013; Mitchell et al., 2016). Women's clinically low sexual desire is associated with lower sexual well-being for both partners (i.e., higher distress and lower sexual satisfaction; Rosen et al., 2019; see also Stephenson & Meston, 2010). Low desire can also present issues for couples' relationships in general, including lower satisfaction with a partner, more conflict in their relationship and less satisfaction with the way conflict is resolved; in fact, these links can be even more impactful than the associations between low desire and age or menopause status (Bodenmann et al., 2006; Brotto et al., 2010; Hayes et al., 2008; Laumann et al., 1999; Metz & Epstein, 2002). Overall, women's low sexual desire is linked to lower sexual and relationship quality and more conflict between partners.

As such, it is crucial for research to consider the unique experiences of couples coping with the women's clinically low sexual desire (compared to couples coping with one or both partner's transient desire declines).

Beyond associations with sexual and relationship quality, women coping with low sexual desire also report broader consequences for their personal well-being. Research has shown a consistent link between heightened anxiety and low sexual desire (Brotto et al., 2010). Often comorbid with anxiety symptoms, especially for women with clinically low desire (compared to their control counterparts; Rosen et al., 2019), are symptoms of depression. Despite links between low sexual desire and poorer well-being for both partners, a growing body of research suggests that some couples can more easily navigate women's low sexual desire; that is, they experience fewer negative consequences relative to other affected couples (e.g., Hogue et al., 2019; Raposo et al., 2020). However, research has not considered whether women with low desire and their partners' lay beliefs about maintaining their sex lives are associated with the possible negative consequences of coping with low desire (e.g., higher distress and lower sexual satisfaction; Rosen et al., 2019). As such, in the current study, we investigated the role of implicit beliefs about sexual satisfaction (i.e., how people believe sexual satisfaction is maintained in relationships) in the sexual, relational, and personal well-being of women coping with clinically low sexual desire and their partners.

Implicit Theories of Sexual Satisfaction

People tend to have relatively stable, basic beliefs about whether aspects of their lives are fixed (i.e., entity or destiny beliefs) or are malleable (i.e., incremental or growth beliefs; Dweck et al., 1995; Knee, 1998; Maxwell et al., 2017), termed implicit or lay beliefs. Indeed, the existing literature suggests that people tend to have a predisposition to either type of belief as an essential part of their world view (Dweck et al., 1995; Whitehead, 1938), and their endorsement of fixed or malleable beliefs increase in stability from childhood into adulthood (Robins & Pals, 2002). However, although some people hold the same general beliefs across contexts, other people's beliefs may differ (Dweck et al., 1995; Maxwell et al., 2017). In the broader literature, for example, people may believe that academic success is fixed (vs. malleable; Robins & Pals, 2002), but they may shift and believe that something else about them, such as their will power, is more malleable (vs. fixed; Job et al., 2010).

Similarly, in romantic relationships, people's beliefs about how challenges are overcome or how relationships are maintained can subsequently shape their feelings and behavior, and these beliefs are measured using two independent dimensions that are examined simultaneously: growth and destiny (for a review, see Knee & Canevello, 2006). People who are higher (versus lower) in *growth beliefs* view relationships as requiring effort to be maintained and are motivated to see challenges as opportunities to grow (Knee, 1998). In situations of conflict, people higher in growth beliefs are also more successful at maintaining positive emotion following disagreements (Knee et al., 2001), believe their partner can change (Knee et al., 2003), and remain committed to their relationship despite their differences (Knee et al., 2004).

In contrast, people higher in *destiny beliefs* view successful relationships as the result of natural compatibility between partners. As such, they are particularly sensitive to compatibility threats and react more negatively to conflict, seeing it as a sign that their partner is not "the one" for them (Burnette & Franiuk, 2010; Knee, 1998; Knee et al., 2003). People who are higher in destiny beliefs are also less satisfied and more likely to break up with their partner when they do not feel that they are with the "right person" (Franiuk et al., 2002; Knee, 1998). Thus, endorsing destiny beliefs may not be harmful for well-being if the relationship is relatively free of conflict. In the case of FSIAD, whereby a female partner is experiencing low sexual desire, couples are faced with a challenge that can harm their perceptions of compatibility with their partner. When challenged in this way, the less adaptive behaviors of those high in sexual destiny beliefs (compared to sexual growth beliefs) in response to conflict can be especially detrimental for their relationship satisfaction (Knee, 1998; Knee et al., 2003).

This large body of research on implicit relationship beliefs has only recently been applied to sexuality (Bohns et al., 2015; Bóthe et al., 2017; Maxwell et al., 2017; Sutherland & Rehman, 2018). People who endorse *sexual growth beliefs* see sexual satisfaction as requiring ongoing effort to maintain over time (Maxwell et al., 2017). They also feel more satisfied with their relationship (and have more satisfied partners) and report more positive sexual outcomes in the moment, over time, and during challenging periods in relationships (e.g., the transition to parenthood; Maxwell et al., 2017). Conversely, people who endorse *sexual destiny beliefs* view sexual satisfaction as the result of being naturally sexually compatible with a partner (Maxwell et al., 2017). In fact, one unique feature of implicit beliefs in the relationship and sexual domains is that fixed/destiny beliefs and malleability/growth beliefs are somewhat independent both statistically and theoretically (see Knee et al., 2003; Maxwell et al., 2017), rather than two ends of the same dimension (e.g., Chiu et al., 1997). That is, individuals can simultaneously believe in partner compatibility, and that they must work to improve their relationship (i.e., they can be simultaneously high or low in both beliefs), although these beliefs are typically moderately negatively correlated (Maxwell et al., 2017, 2019). Between couple members, however, beliefs tend to correlate at low to moderate levels such that partners tend to endorse similar types of beliefs about their sex lives (Maxwell et al., 2017).

Consistent with research on general relationship outcomes, if people high in sexual destiny beliefs experience a sexual disagreement with their partner, they will be more inclined to disengage from their relationship and report more frustrating, disappointing sex as a result (Carswell & Finkel, 2018; Knee, 1998; Maxwell et al., 2017). As such, endorsing sexual destiny beliefs might be particularly detrimental in the context of couples coping with women's distressing low desire (compared to other couples coping with natural declines or brief bouts of low desire): these beliefs might exacerbate the couple's sexual incompatibilities (and low sexual satisfaction) and ultimately lead them to end their relationship (Witting et al., 2008). This notion that sexual problems create issues for individuals who hold sexual destiny beliefs was echoed in recent research (Sutherland & Rehman, 2018). Specifically, when women

were primed with the belief that desire is stable and that they were more likely to face desire problems in a relationship, they were more likely to endorse maladaptive coping strategies (e.g., denial, behavioral disengagement) as potential ways of dealing with desire problems, relative to women primed with the belief that desire generally changes over time (Sutherland & Rehman, 2018). Endorsing sexual growth beliefs in the face of low desire, however, may help couples to navigate their sexual differences with more adaptive coping strategies.

Although the reviewed evidence suggests that when faced with distressing levels of low desire, sexual destiny believers may cope more poorly than sexual growth believers, there is some uncertainty in these predictions. Whereas sexual growth beliefs are often associated with more successfully navigating sexual differences, there may be limits to these buffering effects (Maxwell et al., 2017). For example, research suggests that high levels of sexual disagreement detract from sexual satisfaction – even for people who endorse high levels of sexual growth beliefs (Maxwell et al., 2017).

In addition, one person's implicit sexual beliefs can influence both their own and their partner's outcome; yet, with the exception of the transition to parenthood, most of the prior research has been limited to people who were relatively sexually satisfied. In a sample of couples transitioning to parenthood – a time that is often characterized by novel challenges to the couples' sexual relationship (Pastore et al., 2011) – when new mothers and new fathers endorsed higher sexual growth beliefs, both partners reported higher sexual and relationship satisfaction, whereas when new mothers endorsed higher sexual destiny beliefs, both the new mothers and their partners reported lower relationship satisfaction (Maxwell et al., 2017). Although this is a sample that is known to face sexual challenges, they tend to be more transient challenges (i.e., parents have a ready explanation for the changes in their sexual relationship). As such, although research has explored the experiences of couples in which both members experience normative changes in desire over time (McNulty et al., 2019; Muise et al., 2016), as well as highly satisfied couples facing more transient declines in desire (Maxwell et al., 2017), less is known about the experiences and dynamics of less satisfied couples who are coping with the women's distressing clinical sexual issue.

Moreover, biopsychosocial models of low desire and FSIAD suggest that these psychological factors, like beliefs, play a role in the onset or the maintenance of low desire and its consequences, and in some instances both (e.g., maintaining low desire in the case of destiny beliefs, or possibly increasing desire in the case of growth beliefs; Bancroft et al., 2009; Bitzer et al., 2013; Toates, 2009). It is possible that endorsing strong destiny beliefs might interfere with adaptive coping (e.g., more flexible sexual scripts; Toates, 2009) and thus, serve to maintain and reinforce women's low desire. In contrast, endorsing stronger growth beliefs may put less pressure on the woman with low desire and allow more room to adapt their sexual scripts in a way that could ultimately promote their desire (e.g., less pressure to experience spontaneous desire prior to engaging in sexual activity – i.e., allow for desire to emerge out of arousal as in the incentive-motivation model). Given the current gap in our understanding about how implicit

sexual beliefs function for couples who are less satisfied and who are unclear about the cause of their sexual setbacks, this research will provide a theoretical advance to the existing literature by examining sexual growth and destiny beliefs in a clinical sample who are experiencing a more chronic and distressing sexual issue: women's clinically low sexual desire.

The Current Study

Given that implicit sexual beliefs are thought to be particularly consequential when couples are coping with the women's sexual difficulty, in the current study we aimed to test how sexual growth and destiny beliefs are associated with sexual, relationship, and personal well-being among couples coping with clinically low sexual desire (i.e., FSIAD). The current research was a dyadic study of couples, in which a female partner was diagnosed with FSIAD, and included a one-year longitudinal follow-up. This design extends past experimental research on implicit beliefs and desire (Sutherland & Rehman, 2018) by examining women diagnosed with low desire who are involved in romantic relationships, and their romantic partners. In this study, we tested the predictions that when women with low desire and their partners are higher in sexual destiny beliefs, they and their partners will report poorer sexual, relationship, and personal well-being compared to those who are lower in sexual destiny beliefs; but when they report higher sexual growth beliefs, they and their partners will report greater well-being. We also tested whether the effects persisted over time, differed based on the duration of the women's low desire, or were accounted for by people's perceived sexual compatibility with their partner. This research has the potential to advance the current understanding of the role of implicit sexual beliefs in couples coping with challenging sexual issues.

Method

Participants

We recruited women who met the diagnostic criteria for FSIAD consisting of three or more of the following symptoms for at least six months, which are accompanied by significant distress and not attributed to another psychiatric or medical disorder: little to no sexual interest, sexual thoughts, sexual initiation/receptivity to a partner's sexual initiation, excitement or pleasure during sex (at least 75% of the time), responsive desire to sexual cues, or genital/non-genital sensations during sex (at least 75% of the time; American Psychiatric Association, 2013; Mitchell et al., 2016). To assess whether women met the diagnostic criteria, participants were assessed in a clinical interview (described below under Procedure). We recruited participants through online and physical advertisements in Canada and the United States as part of a larger study (Rosen et al., 2019).

In addition to women meeting FSIAD criteria and to ensuring participating couples would be able to meaningfully respond to the measures we assessed, eligible couples had to either be living together or have in-person contact at least four times per week, be in a committed relationship for at least six months, have had previous sexual contact with their partner, be

18 years of age or older, not currently pregnant or within one year post-partum, and be able to read and understand English. Many of the measures directly assessed sexuality-related variables, for which sexual experience and frequent in-person contact would have been necessary for participants to adequately comprehend and respond and to have the opportunity for sexual activity during the reporting period. We assessed three attention checks at Time 1: “This is an attention check. Please select 4 (‘Almost completely’), “This is an attention check. Please select 1 (‘Most of the time’), and “This is an attention check. Please select 7 (‘Strongly Agree’).” Twenty-six participants were excluded from the analyses for failing at least one attention check at Time 1.

As per recommendations for achieving sufficient power to detect medium-sized actor effects with dyadic data, we aimed to recruit 100 couples (Kenny et al., 2006). After excluding participants due to suspicious responses ($n = 14$), only one partner completing Time 1 ($n = 10$) or failing any attention check ($n = 26$), our final sample consisted of 97 women with FSIAD and their partners ($N = 88$ men, seven women, two other). Participants ranged in age from 19 to 70 years ($M = 31.64$, $SD = 8.53$). The sample was primarily White/Caucasian (74.2%), straight/heterosexual (77.3%), and married (41.8%); the average relationship length was 7.67 years ($SD = 7.16$), and women were coping with FSIAD for 4.55 years on average ($SD = 5.26$). For more information about this sample, see Rosen et al. (2019).

Although we did not assess whether partners of women with FSIAD had a confirmed diagnosis of a sexual dysfunction, another study that utilized the same data set from which our findings were derived showed that the male partners of women with FSIAD ($n = 89$) reported significantly more difficulties with sexual functioning (e.g., orgasm, erectile function; assessed with the International Index of Erectile Function; Rosen et al., 1997) and lower sexual satisfaction (overall and with intercourse) in the past four weeks, compared to male partners of women without a diagnosis of FSIAD (Rosen et al., 2019). However, their level of sexual functioning did not reach clinical levels of impairment.

Procedure

Couples were pre-screened for eligibility via telephone as part of a larger study (Rosen et al., 2019). Then, women reporting low desire completed a clinical interview (30–45 minutes) to determine a diagnosis of FSIAD over the telephone with a doctorate-level clinical psychologist or graduate student in a clinical psychology program. Details about the clinical interview are available on the Open Science Framework (OSF): https://osf.io/mecrq/?view_only=b2dcc065d6864c22b515b28435da2d9a. The clinical interview was designed to rule out other related factors (e.g., experiencing low desire due to depression, side effects of medications, etc.). Once eligibility and consent were obtained, participants completed an online baseline survey (Time 1), followed by an online survey one year later (Time 2). If participants did not complete the survey within one week from receiving the link, then they received a phone call from a research assistant and a reminder e-mail two and three weeks after. Surveys expired after four weeks. Each partner was compensated 18 CAD (\$15 USD) as an Amazon gift card for completing Time 1, and 10 CAD (\$8 USD) as an Amazon gift card for completing Time 2. Nine couples from the original sample of 97 couples were no longer with their partner by the Time 2 survey and one couple withdrew. Of the 87 remaining couples, at least one member from 72 couples completed Time 2 (a retention rate of 74%), and there were 66 couples (68%) for whom both partners completed Time 2.

Measures

In addition to the key variables outlined below, both partners reported their age, relationship duration and sexual frequency (both are couple-level variables calculated by taking the mean of each partner’s reports). See Table 1 for correlations between all measures at Time 1.

Sexual Growth and Destiny Beliefs

We measured implicit sexual beliefs using the shortened version of the Implicit Theories of Sex Scale (Maxwell et al., 2017,

Table 1. Correlations between key variables in couples coping with women’s low sexual desire at Time 1.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	.89***	.79***	-.18	-.07	.11	.44***	-.11	-.12	.08	-.28**	.08	-.14	-.20*
2. Rel. length	.71***	.995***	-.04	-.15	.16	.44***	-.03	-.09	.05	-.22*	.04	-.11	-.11
3. Sexual freq.	-.07	-.04	.65***	-.13	.15	-.05	.33**	.34**	-.05	.14	.02	.01	-.08
4. SDB	.24*	.06	.05	.21*	-.27**	-.11	-.34**	-.03	-.06	-.36***	.27**	.27**	.24*
5. SGB	.15	.25*	.04	-.11	.32**	.13	.21*	.24*	-.09	.16	-.18	-.16	-.05
6. FSIAD duration	.38***	.44***	-.05	.06	.13	-	-.22*	-.18	-.20	-.14	.15	-.13	-.18
7. Compatibility	-.11	-.04	.27**	-.23*	.10	-.21*	.28**	.16	-.11	.33**	-.18	-.07	-.08
Sexual well-being													
8. Sexual desire	-.09	.06	.06	-.21*	-.07	-.06	.11	-.28**	-.16	.23*	.03	-.01	-.08
9. Sexual distress	.11	.10	-.20*	.15	.03	.01	-.36***	-.10	.14	-.02	-.07	.27**	.19
Rel. well-being													
10. Rel. satisfaction	-.17	-.06	.21*	-.39***	.09	-.18	.59***	.30**	-.56***	.48***	-.55***	-.30**	-.29**
11. Conflict	.08	.00	-.06	.12	-.15	.01	-.22*	-.06	.18	-.58***	.50***	.26*	.15
Personal well-being													
12. Anxiety	.07	-.02	-.06	.06	.02	.00	-.19	-.14	.44***	-.45***	.32**	.22*	.77***
13. Depression	.02	.06	.03	.01	.06	-.07	.00	-.23*	.44***	-.33**	.29**	.75***	.21*

*** $p < .001$, ** $p < .01$, * $p < .05$. Women with FSIAD’s correlations are above the diagonal. Partner’s correlations are below the diagonal. Bolded correlations are between both partners’ scores. Rel. = relationship. Freq. = frequency. SDB = sexual destiny beliefs. SGB = sexual growth beliefs. FSIAD = female sexual interest/arousal disorder. Compatibility = perceived partner sexual compatibility. FSIAD duration is denoted with a dash (-) on the diagonal because we only assessed it for women with FSIAD (not their partners). $N = 97$ women with FSIAD and 97 partners, except for correlations including “FSIAD duration” ($n = 95$ for both roles) or “age” ($n = 97$ women with FSIAD and 96 partners).

Study 5) with items rated on 7-point scales (1 = “strongly disagree” to 7 = “strongly agree”). Five items assessed *sexual destiny beliefs* (e.g., “A couple is either destined to have a satisfying sex life or they are not”; women with FSIAD: $\alpha = .85$, $M = 2.37$, $SD = 1.12$; partners: $\alpha = .80$, $M = 2.41$, $SD = 1.07$) and five items assessed *sexual growth beliefs* (e.g., “In a relationship, maintaining a satisfying sex life requires effort”; women with FSIAD: $\alpha = .84$, $M = 6.00$, $SD = .85$; partners: $\alpha = .83$, $M = 5.86$, $SD = .99$). Individuals get scores for both sexual destiny and sexual growth, and both beliefs are entered simultaneously in statistical models.

Perceived Sexual Compatibility

We assessed perceived sexual compatibility with one item at Time 1 (Maxwell et al., 2017). Participants rated the item “My partner is as close to ideal as a sexual partner as I ever expect to find” on a 7-point scale from 1 = “strongly disagree” to 7 = “strongly agree” (women with FSIAD: $M = 4.37$, $SD = 1.90$; partners: $M = 4.42$, $SD = 1.80$).

Sexual Frequency

We assessed sexual frequency in the past four weeks with five items at Time 1: oral sex (giving to partner), oral sex (receiving from partner), giving manual stimulation (touching or massaging your partner’s genitals), receiving manual stimulation (your partner touching or massaging your genitals), and sexual intercourse with vaginal penetration. Participants rated items on a 7-point scale: 0 = “not at all”, 1 = “once or twice”, 2 = “once a week”, 3 = “2–3 times a week”, 4 = “4–5 times a week”, 5 = “once a day”, 6 = “more than once a day”. Both partners’ scores were highly correlated ($r = .65$, $p < .001$), so we calculated a couple-level average sexual frequency variable ($M = 1.09$, $SD = .73$).

Sexual Well-Being

Sexual Desire

We assessed sexual desire with a modified version of the desire subscale of the Female Sexual Function Index (FSFI; Rosen et al., 2000; see also Masheb et al., 2004). Participants rated two items on 5-point scales: “Over the past four weeks, how often did you feel sexual desire or interest for your partner?” (1 = “almost always or always” to 5 = “almost never or never”) and “Over the past four weeks, how would you rate your level (degree) of sexual desire or interest?” (1 = “very high” to 5 = “very low or none at all”). Items were reverse-coded (women with FSIAD: $r = .54$, $p < .001$, $M = 1.79$, $SD = .70$; partners: $r = .66$, $p < .001$, $M = 3.95$, $SD = .89$) such that higher scores indicate higher desire. We assessed the same items at Time 2 (women with FSIAD: $r = .68$, $p < .001$, $M = 2.31$, $SD = 1.00$; partners: $r = .56$, $p < .001$, $M = 4.01$, $SD = .80$).

Sexual Distress

We assessed sexual distress with the Female Sexual Distress Scale–Revised (Derogatis et al., 2008; also validated in men, Santos-Iglesias et al., 2018). Participants rated thirteen items about their sexual distress in the past 30 days on 5-point scales (e.g., “How often did you feel distressed about your sex life;”

0 = “never” to 4 = “always”; women with FSIAD: $\alpha = .91$, $M = 30.08$, $SD = 9.85$; partners: $\alpha = .92$, $M = 17.62$, $SD = 10.49$). The total possible score was 52, and higher scores reflect greater sexual distress. We assessed the same items at Time 2 (women with FSIAD: $\alpha = .95$, $M = 23.17$, $SD = 11.65$; partners: $\alpha = .95$, $M = 18.30$, $SD = 11.02$).

Relationship Well-Being

Relationship Satisfaction

We assessed relationship satisfaction with the 16-item Couples Satisfaction Index (CSI-16; Funk & Rogge, 2007). We assessed items (e.g., “Please indicate the degree of happiness, all things considered, of your relationship”) with a variety of 6- and 7-point scales (women with FSIAD: $\alpha = .97$, $M = 58.37$, $SD = 15.40$; partners: $\alpha = .96$, $M = 60.53$, $SD = 13.12$). The total possible score was 81, and higher scores indicate higher relationship satisfaction. We assessed the same items at Time 2 (women with FSIAD: $\alpha = .97$, $M = 58.26$, $SD = 15.37$; partners: $\alpha = .98$, $M = 59.42$, $SD = 16.47$).

Conflict

We measured conflict with two items from the Revised Dyadic Adjustment Scale (Busby et al., 1995; women with FSIAD: $r = .67$, $p < .001$, $M = 1.94$, $SD = .70$; partners: $r = .64$, $p < .001$, $M = 1.81$, $SD = .64$). Participants rated two items (i.e., “How often do you and your partner quarrel (i.e., argue, disagree, conflict)?” and “How often do you and your partner ‘get on each other’s nerves?’”) on 6-point reverse-coded scales (0 = “all of the time” to 5 = “never”). Higher scores indicate more conflict. We assessed the same items at Time 2 (women with FSIAD: $r = .65$, $p < .001$, $M = 1.88$, $SD = .78$; partners: $r = .70$, $p < .001$, $M = 1.86$, $SD = .66$).

Personal Well-Being

Anxiety

We assessed anxiety symptoms with the short form of the State-Trait Anxiety Inventory (Spielberger et al., 1968). Participants rated six items (e.g., “I am worried”) on 4-point scales (1 = “not at all” to 4 = “very much”; women with FSIAD: $\alpha = .88$, $M = 14.79$, $SD = 4.39$; partners: $\alpha = .84$, $M = 12.20$, $SD = 3.69$). The total possible score was 24, and higher scores reflect higher levels of anxiety symptoms. We assessed the same items at Time 2 (women with FSIAD: $\alpha = .86$, $M = 14.00$, $SD = 4.20$; partners: $\alpha = .86$, $M = 12.23$, $SD = 3.89$).

Depression

We assessed depressive symptoms with the Beck Depression Inventory-II (Beck et al., 1996). Participants rated twenty items (e.g., “sadness,” “pessimism”) on a variety of 4-point scales (women with FSIAD: $\alpha = .94$, $M = 14.94$, $SD = 11.69$; partners: $\alpha = .89$, $M = 10.19$, $SD = 7.70$). We assessed the same items at Time 2 (women with FSIAD: $\alpha = .92$, $M = 11.42$, $SD = 9.72$; partners: $\alpha = .93$, $M = 9.26$, $SD = 8.34$). The total possible score was 60, and higher scores indicated higher levels of depressive symptoms.

Table 2. Associations between implicit sexual beliefs and sexual well-being.

	Women's sexual desire		Partner's sexual desire		Women's sexual distress		Partner's sexual distress	
	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>
Women's SDB	.01(.07)	.21	-.23(.08)	-2.82**	-.75(.97)	-.78	-.29(1.04)	-.28
Partner's SDB	.08(.07)	1.12	-.16(.08)	-1.98 [†]	-1.01(.97)	-1.04	1.49(1.04)	1.44
Women's SGB	.22(.09)	2.44*	-.24(.11)	-2.21*	-1.17(1.29)	-.91	-.61(1.38)	-.44
Partner's SGB	.01(.08)	.07	-.09(.09)	-.93	-.92(1.09)	-.84	.61(1.17)	.52

[†] $p = .051$, * $p < .05$, ** $p < .01$, *** $p < .001$. We used unstandardized beta (*b*) coefficients. Degrees of freedom were equal to 92. $N = 97$ couples. Women = women with FSIAD. SDB = sexual destiny beliefs. SGB = sexual growth beliefs.

Data Analysis

Data were analyzed using multilevel modeling guided by the Actor-Partner Interdependence Model (Kenny et al., 2006) in SPSS 23.0. Data and syntax for the analyses are available on the OSF: https://osf.io/mecrq/?view_only=b2dcc065d6864c22b515b28435da2d9a. We tested distinguishable (1 = “women with FSIAD”, 2 = “partners”) two-level models where persons were nested within dyads (Kenny et al., 2006), and only one outcome variable was assessed per model. We grand-mean centered all predictors in the models (i.e., actor and partner sexual destiny beliefs and sexual growth beliefs), which represent between-person differences. Unstandardized *bs* can be interpreted as the average change in the dependent variable for every one-unit change in the predictor value. To rule out alternative explanations, we tested moderations between sexual destiny beliefs and sexual growth beliefs and either FSIAD duration (i.e., assessed by asking women with FSIAD how many months they have experienced low sexual interest/arousal) or perceived sexual compatibility. We probed significant interactions by calculating the simple slope effects using one standard deviation (*SD*) value below and above the sample mean of the moderator (Aiken et al., 1991).

Next, to test whether key outcomes differed from Time 1 (baseline) to Time 2 (one-year follow-up) in women with FSIAD and their partners, we conducted paired-samples *t*-tests. For the variables that differed from Time 1 to Time 2 for either partner, we then tested whether the grand-mean centered Time 1 predictors (i.e., actor and partner sexual destiny beliefs and sexual growth beliefs) were associated with changes in the outcomes one year later, by predicting the outcome one year later while accounting for the person's grand-mean centered outcome as assessed at Time 1. We also tested whether there were differences in any of the key outcomes between women with FSIAD who completed Time 2 and women with FSIAD who did not complete Time 2.

Results

Time 1 Analyses

Sexual Well-being

First, when women with FSIAD reported higher sexual destiny beliefs and when their partners reported higher sexual destiny beliefs, partners felt lower sexual desire (see Table 2). There were no other associations between sexual destiny beliefs and either partners' sexual well-being. In contrast, when women with FSIAD reported higher sexual growth beliefs, they

reported higher sexual desire, but their partners reported lower sexual desire. There were no other significant associations between sexual growth beliefs and either partner's sexual well-being.¹

Relationship Well-being

Next, when women with FSIAD reported higher sexual destiny beliefs, both they and their partners reported lower relationship satisfaction and higher conflict (see Table 3). When the partners of women with FSIAD reported higher sexual destiny beliefs, they reported lower relationship satisfaction. There were no other significant effects of sexual destiny beliefs, or between either partner's sexual growth beliefs, on relationship well-being.

Personal Well-being

Finally, when women with FSIAD reported higher sexual destiny beliefs, they reported higher anxiety, and both they and their partners reported more depressive symptoms (see Table 4). When the partners of women with FSIAD reported higher sexual destiny beliefs, women with FSIAD reported lower anxiety and fewer depressive symptoms. There were no

¹We also tested the associations between sexual growth and destiny beliefs and another measure of desire – the partner-focused dyadic subscale of the Sexual Desire Inventory (SDI; Moyano et al., 2017; Spector et al., 1996). Consistent with when desire was assessed with a modified version of the desire subscale of the FSI (Rosen et al., 2000), as assessed by the SDI, women with FSIAD's sexual growth beliefs were associated with their own higher sexual desire, $b = 3.45$, $SE = 1.15$, $t(92) = 3.01$, $p = .003$, and women with FSIAD's partners' sexual destiny beliefs were marginally associated with their own (i.e., the partners, not the women with FSIAD) lower sexual desire, $b = -1.49$, $SE = .80$, $t(92) = -1.87$, $p = .065$. Uniquely for the SDI at Time 2, partners' sexual destiny beliefs were associated with women with FSIAD's lower sexual desire at Time 2, $b = -2.44$, $SE = 1.01$, $t(63) = -2.41$, $p = .019$. None of the effects predicting sexual desire were moderated by women's duration of FSIAD or either partner's perceptions of sexual compatibility. Finally, controlling for both partners' perceived sexual compatibility, the effect of a partner's sexual destiny beliefs on their own lower sexual desire was still marginally significant, $b = -1.46$, $SE = .81$, $t(90) = -1.80$, $p = .076$, as well as the effect of women with FSIAD's sexual growth beliefs on their own sexual desire, $b = 2.81$, $SE = 1.04$, $t(90) = 2.69$, $p = .009$, and the effect of partners' sexual destiny beliefs on women with FSIAD's lower sexual desire at Time 2, $b = -2.37$, $SE = 1.04$, $t(61) = -2.28$, $p = .026$. However, other associations were not replicated with the SDI. Specifically, women with FSIAD's sexual growth beliefs were not associated with their partners' sexual desire, $b = -.81$, $SE = 1.06$, $t(92) = -.76$, $p = .449$, and neither were their sexual destiny beliefs, $b = -.97$, $SE = .79$, $t(92) = -1.23$, $p = .223$. Similarly, controlling for both partners' perceived sexual compatibility, women with FSIAD's sexual destiny beliefs were no longer associated with their partners' sexual desire, $b = -.63$, $SE = .84$, $t(90) = -.75$, $p = .456$, and neither were their sexual growth beliefs, $b = -.95$, $SE = 1.07$, $t(90) = -.89$, $p = .376$.

Table 3. Associations between implicit sexual beliefs and relationship well-being.

	Women's relationship satisfaction		Partner's relationship satisfaction		Women's conflict		Partner's conflict	
	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>
Women's SDB	-4.72(1.43)	-3.30**	-3.13(1.16)	-2.71**	.16(.07)	2.32*	.21(.06)	3.59**
Partner's SDB	-.70(1.43)	-.49	-4.05(1.16)	-3.50**	.005(.07)	.07	.02(.06)	.34
Women's SGB	1.48(1.91)	.78	.78(1.54)	.50	-.12(.09)	-1.29	.003(.08)	.03
Partner's SGB	-.95(1.61)	-.59	-.40(1.30)	-.31	.05(.08)	.68	-.03(.07)	-.49

* $p < .05$, ** $p < .01$, *** $p < .001$. We used unstandardized beta (*b*) coefficients. Degrees of freedom were equal to 92. $N = 97$ couples. Women = women with FSIAD. SDB = sexual destiny beliefs. SGB = sexual growth beliefs.

Table 4. Associations between implicit sexual beliefs and personal well-being.

	Women's anxiety		Partners' anxiety		Women's depression		Partners' depression	
	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>	<i>b</i> (SE)	<i>t</i>
Women's SDB	1.14(.41)	2.80**	.64(.36)	1.79 [†]	3.09(1.09)	2.85**	1.63(.75)	2.19*
Partners' SDB	-.94(.41)	-2.31*	.04(.36)	.11	-3.08(1.09)	-2.83**	-.22(.75)	-.29
Women's SGB	-.66(.55)	-1.22	-.47(.48)	-.98	-.09(1.45)	-.07	-.28(1.00)	-.28
Partners' SGB	.09(.46)	.20	.41(.41)	1.00	-.24(1.23)	-.20	.98(.84)	1.17

[†] $p = .078$, * $p < .05$, ** $p < .01$, *** $p < .001$. We used unstandardized beta (*b*) coefficients. Degrees of freedom were equal to 92. $N = 97$ couples. Women = women with FSIAD. SDB = sexual destiny beliefs. SGB = sexual growth beliefs.

other significant effects of sexual destiny beliefs, and there were no significant associations between either partner's sexual growth beliefs and their personal well-being.

In sum, when women with FSIAD reported higher sexual destiny beliefs, they reported lower relationship satisfaction and higher conflict, higher anxiety, and more depressive symptoms, and their partners reported lower sexual desire, lower relationship satisfaction, higher conflict, and more depressive symptoms. When partners were higher in sexual destiny beliefs, they reported lower sexual desire and lower relationship satisfaction, but the women with FSIAD reported lower anxiety and fewer depressive symptoms. Holding higher sexual growth beliefs was not significantly associated with well-being, with two exceptions. When women with FSIAD reported higher sexual growth beliefs, they reported higher sexual desire, but their partners reported lower sexual desire.

Time 2 Analyses

Next, we report the associations between sexual growth and destiny beliefs and couples' well-being one year later. First, we conducted a paired-samples *t*-test to compare sexual, relationship, and personal well-being outcomes at Time 1 (baseline) to Time 2 (one-year follow-up) in women with FSIAD and their partners who were still in a relationship one year later to determine if there were changes in these outcomes over time. Given that some couples did not complete Time 2 or broke up and needed to be excluded from the Time 2 data, they were also excluded from the Time 1 data in the following paired-samples *t*-test analyses. Thus, the following means and standard deviations for variables at Time 1 differ slightly from the values reported in the Measures section above. Overall there was a significant increase in sexual desire for women with FSIAD from Time 1 ($M = 1.76$, $SD = .73$) to Time 2 ($M = 2.31$, $SD = 1.00$), $t(68) = -4.85$, $p < .001$. In addition, women with FSIAD also reported lower sexual distress from Time 1 ($M = 29.32$, $SD = 9.13$) to Time 2 ($M = 23.17$, $SD = 11.65$), $t(68) = 4.69$, p

$< .001$, as well as fewer depressive symptoms from Time 1 ($M = 13.75$, $SD = 10.89$) to Time 2 ($M = 11.42$, $SD = 9.72$), $t(68) = 2.01$, $p = .048$. There were no other significant differences between Time 1 and Time 2 in women with FSIAD or their partners. Given that only 9% of women in this sample reported seeking treatment over the previous year, it seems that the key indicators of FSIAD – sexual desire and distress – showed some natural improvement over time, as did women with FSIAD's depressive symptoms.

To ensure that those who completed Time 2 did not differ significantly from those who did not complete Time 2, we also conducted an independent-samples *t*-test to compare the sexual, relationship, and personal well-being outcomes of women with FSIAD who completed Time 2 ($n = 70$) to women with FSIAD who did not ($n = 27$).² There were no significant differences in any outcome variable, indicating that those who completed Time 2 were not significantly different in our key variables of interest from those who did not participate at Time 2.

Only women with FSIAD, but not their partners, demonstrated changes in the key outcomes over time; therefore, we tested the effects of women with FSIAD's and their partners' sexual growth and destiny beliefs at Time 1 on only the women with FSIAD's sexual and personal well-being outcomes that differed one year later. That is, we only tested effects for women with FSIAD's well-being over time because only the women (not their partners) showed significant changes in well-being

²We conducted independent samples *t*-tests to test whether there were key demographic differences (i.e., age, relationship duration, FSIAD duration) in women with FSIAD who did vs. did not complete Time 2. There were no significant differences in age, relationship duration, or FSIAD duration, indicating that those who completed Time 2 were not significantly different in key demographic variables from those who did not participate at Time 2. In addition, we conducted an additional independent samples *t*-test to compare the sexual, relationship, and personal well-being outcomes of partners of women with FSIAD who completed Time 2 to partners of women with FSIAD who did not. Similar to comparisons in women with FSIAD, there were no significant differences in any outcome variable for partners, indicating that the partners of those who completed Time 2 were not significantly different in our key variables of interest from the partners of those who did not participate at Time 2.

Table 5. Associations between women with FSIAD's implicit sexual beliefs and their sexual and personal well-being one year later.

	Sexual desire		Sexual distress		Depression	
	<i>b</i> (<i>SE</i>)	<i>t</i>	<i>b</i> (<i>SE</i>)	<i>t</i>	<i>b</i> (<i>SE</i>)	<i>t</i>
Women's SDB	.05(.10)	.47	1.95(1.16)	1.68	-.17(.97)	-.18
Women's SGB	-.07(.15)	-.47	.19(1.67)	.11	.65(1.33)	.49
Partners' SDB	-.16(.10)	-1.55	-.05(1.16)	-.05	.89(.96)	.92
Partners' SGB	-.14(.12)	-1.24	-.68(1.34)	-.51	-.81(1.05)	-.77

* $p < .05$, ** $p < .01$, *** $p < .001$. We used unstandardized beta (*b*) coefficients. Degrees of freedom were equal to 63. $N = 69$ women with FSIAD. Women = women with FSIAD. SDB = sexual destiny beliefs. SGB = sexual growth beliefs.

outcomes (i.e., sexual desire, sexual distress, and depression). All longitudinal analyses were conducted using multiple regression models (given we were analyzing changes in only one couple member). After accounting for the outcome of interest at Time 1, we did not find any significant associations between either partner's sexual growth and destiny beliefs at Time 1 and changes in the women with FSIAD's sexual, relationship and personal well-being at Time 2 (see Table 5).

Ruling Out Alternative Explanations

Duration of FSIAD

Next, we aimed to rule out whether our effects differed based on the duration with which the women in this sample have been coping with low sexual desire. It is possible that growth beliefs would no longer have a positive association with one's sexual desire when couples have been coping with FSIAD for a long time. None of the associations were significantly moderated by the duration of low desire, suggesting that the findings are consistent both for couples who have been coping with the women's low desire for shorter as well as longer durations.

Perceived Sexual Compatibility

Lastly, we aimed to rule out whether our effects differed based on evaluations of the extent to which people perceived their partner as sexually compatible. Perceived sexual compatibility may have been driving the effects such that having a compatible partner reduces the importance of sexual beliefs for well-being. It is also possible that destiny beliefs were particularly impactful when people perceived their partner as low versus high in overall sexual compatibility (e.g., Franiuk et al., 2002; Maxwell et al., 2017). However, all effects reported above remained significant when actors' and partners' perceptions of sexual compatibility were controlled in the model, suggesting that perceived compatibility was not driving the effects.

Finally, with one exception, none of the associations were significantly moderated by perceived sexual compatibility. The exception was that the association between women with FSIAD's sexual destiny beliefs and their own reports of conflict was moderated by their partners' perceptions of sexual compatibility at Time 1, $b = .11$, $SE = .05$, $t(82) = 2.28$, $p = .025$. For women with FSIAD, when their partners perceived them as being highly sexually compatible with them (+1 *SD*), women's greater sexual destiny beliefs were unexpectedly associated with higher conflict, $b = .36$, $SE = .11$, $t(82) = 3.32$, $p = .001$, whereas when their partners perceived them as being low in sexual compatibility (-1 *SD*), women's sexual destiny beliefs no longer predicted conflict, $b = -.04$, $SE = .12$, $t(82) = -.29$, $p = .770$. Given that there were no

significant effects for Time 2, we did not test whether longitudinal effects differed by perceived sexual compatibility.

Discussion

People's beliefs about how sexual satisfaction is maintained over time are associated with their relationship satisfaction and maintenance, even among couples coping with sexual challenges (e.g., couples transitioning to parenthood; Maxwell et al., 2017). However, no research to date has assessed how implicit sexual beliefs might be uniquely associated with both partners' sexual, relational, and personal well-being outcomes in couples coping with the women's clinical sexual dysfunction. In the current study, we demonstrated that sexual beliefs are also associated with well-being for couples coping with a common and distressing sexual problem – chronic and clinically low desire in a female partner. Women with FSIAD who endorsed higher sexual growth beliefs – believing that sexual satisfaction takes work and effort to maintain – reported higher sexual desire even in the context of having clinically low levels of desire.

However, the current study revealed that endorsing sexual destiny beliefs might have negative associations for couples coping with this sexual problem. When women with FSIAD endorsed higher sexual destiny beliefs – believing that a couple is either sexually compatible or not – their partners reported lower sexual desire, both they and their partners reported lower relationship satisfaction, more conflict and more depressive symptoms, and the women themselves reported more anxiety symptoms. When partners reported endorsing higher sexual destiny beliefs, they also reported lower relationship satisfaction. However, these effects did not persist one year later. There were some unexpected findings, as well, which we consider in more detail below. Overall, the current study demonstrates that implicit sexual beliefs are associated with sexual, relational and personal well-being for couples coping with FSIAD.

Applying Theories of Implicit Sexual Beliefs to Low Sexual Desire

This work contributes to the literature on implicit sexual beliefs in romantic relationships (e.g., Maxwell et al., 2017). We extend past experimental work on implicit beliefs in a non-clinical sample of women (Sutherland & Rehman, 2018) to women coping with clinically low desire (and their romantic partners), which is an important contribution to the literature given the limited research about how these beliefs function when couples are less satisfied or coping with a challenging issue. Women with sexual dysfunction, including low desire, report feelings of shame and inadequacy as a romantic partner and as a woman more broadly (Parish & Hahn, 2016; Shallcross et al., 2018), and it is conceivable that partners might feel similar emotions in addition to rejection. Higher sexual destiny beliefs in the context of a sexual dysfunction such as FSIAD are likely to reinforce these negative emotions further, given the incongruence in high sexual destiny beliefs and lived experience (i.e., belief in natural sexual compatibility vs. experiencing sexual problems), and may promote greater avoidance (of sex

but also non-sexual touch, and/or avoidance of communication about the sexual problem).

Indeed, prior research has found that women with sexual dysfunction report poorer sexual communication with their partners and respond to partner touch with more negative affect and avoidance compared to women without sexual problems (Rancourt, MacKinnon et al., 2017; Rosen et al., 2019). Consistent with cognitive-behavioral models of sexual dysfunction (e.g., Barlow's model; Barlow, 1986), endorsing higher sexual destiny beliefs (i.e., believing that partners are destined to have a satisfying sex life, or they are not) might lead people to feel helpless in resolving their low desire, enabling the negative consequences of low desire to persist in their relationship (e.g., Bohns et al., 2015; Bóthe et al., 2017; Seligman & Maier, 1967; Sutherland & Rehman, 2018). These mechanisms are consistent with research indicating that those primed with ideas similar to sexual destiny thought they would cope with desire problems by using maladaptive strategies, including behavioral and mental disengagement, denial, and humor (Sutherland & Rehman, 2018).

Women with FSIAD who reported higher sexual growth beliefs also concurrently reported higher sexual desire. It is possible that beliefs about sexual satisfaction requiring work and effort to maintain – especially in the current sample of couples coping with a distressing sexual issue – encourages partners to engage in more adaptive coping by practicing patience when navigating their sexual challenges and searching for ways to overcome them. For couples coping with women's low desire, this might mean being more responsive to each other's needs, which is linked to higher sexual desire in both community and clinical couples (e.g., Muise et al., 2017, 2013), or having more open sexual communication about their distress and sexual or relational dissatisfaction, which has been linked with greater satisfaction and lower distress for couples coping with a sexual dysfunction (e.g., women's pain during sex; Muise et al., 2017; Rancourt, Flynn et al., 2017; Rosen et al., 2015). In fact, it is possible that reflecting on one's own sexual growth belief tendencies while participating in a study about low desire could have reassured or supported women about their concerns, exposed them to new ways of thinking about their sexual challenges (e.g., seeing conflicts about the women's low desire as an opportunity for growth), or encouraged them to adopt more relationship maintenance behaviors – all of which could have led to higher desire. These mechanisms should be tested in future research, especially given we cannot make causal claims for the association between sexual growth beliefs and higher desire.

Unexpectedly in this sample, we found that when partners were higher in sexual destiny beliefs, the women with FSIAD reported lower anxiety and depressive symptoms. Although this seems counterintuitive, women with low desire generally feel worse (i.e., more guilt, anxiety, and depression) compared to their partners when thinking about their sexual relationship (Graham et al., 2017; Tiefer et al., 2015). If women perceive a partner as viewing sexual satisfaction as the result of natural sexual compatibility (rather than the result of continuous effort and maintenance), then this perception may actually relieve women's distress about the impact of their low desire on their relationship, and as a result, help them to feel less negatively

affected by their diagnosis. In other words, having a partner who holds high sexual destiny beliefs may buffer women with FSIAD's symptoms of anxiety and depression by limiting their attention on or pressure to "fix" their low desire (i.e., reducing the expectations placed on them, feeling relieved to be partnered with someone who does not subscribe to a belief that more effort will fix the problem) or by leading them to be more accepting of their low desire.

In another unexpected result, we found that when women with FSIAD were higher in sexual growth beliefs, their partners felt lower desire. Endorsing higher sexual growth beliefs may translate into women with FSIAD being more persistently focused on working through the distressing sexual problem with their partners (e.g., being more motivated to do things to trigger their desire), which, as noted, is linked to their own higher sexual desire. However, at the same time, these efforts might feel like a "turn off" to their partners; that is, women with FSIAD's focused attention on working through their low desire may contradict the "spontaneity narrative" that some people want in their relationship (e.g., Sims & Meana, 2010), which could ultimately dampen their partners' desire. These unexpected findings provide preliminary evidence that partners' sexual destiny beliefs can have positive associations for women with FSIAD, but their own sexual growth beliefs can have negative associations. However, replication is necessary before drawing conclusions because the general literature on implicit beliefs is not consistent with this pattern of associations. Moreover, these patterns may not be adaptive for the long-term health and well-being of couples coping with FSIAD.

Implications, Limitations and Future Directions

Our findings from Time 1 demonstrate preliminary associations between implicit sexual beliefs and well-being outcomes among couples coping with the women's clinically low desire. However, future research using experimental methods is necessary to consider whether it is possible to modify implicit sexual beliefs and see associated changes in coping with sexual dysfunctions. For example, in cognitive behavioral therapy, more adaptive beliefs (such as sexual growth beliefs) are promoted and less adaptive beliefs (such as sexual destiny beliefs) are challenged and reframed using a variety of techniques (e.g., cognitive restructuring), which have subsequently been linked to more adaptive coping strategies (Beck & Haigh, 2014). It is important to note, however, that the unexpected findings in this study suggest that sexual growth and sexual destiny beliefs are not only positive or negative, respectively. Understanding the nuanced associations between implicit sexual beliefs and well-being outcomes may aid in determining whether or how these beliefs could be targeted in future work.

Although this research provides initial evidence for associations between implicit beliefs and well-being outcomes among couples coping with FSIAD, the study was not without limitations. Given the difficulty of recruiting and retaining members of this population over time, of the 97 couples who completed the baseline (Time 1) survey, only 66 couples completed the second survey one year later (i.e., couples for whom both partners completed Time 2). Therefore, we ultimately had

less power to detect changes in associations over time, and indeed all longitudinal effects were non-significant. Our findings were all cross-sectional and we cannot confirm causality. Our goal was first to test how implicit sexual beliefs are associated with well-being outcomes in the context of couples coping with the women's persistent low desire. Although there is some past experimental evidence of boosting sexual growth beliefs to promote satisfaction (Maxwell et al., 2017) and reduce maladaptive coping to hypothesized sexual desire problems (Sutherland & Rehman, 2018), research has not yet explored whether experimentally manipulating sexual growth and destiny beliefs in a sample of couples coping with the women's low desire can lead to improvements in their well-being. By manipulating the extent to which people are motivated to change their behaviors in the face of sexual challenges, we could test how implicit sexual beliefs function as a coping mechanism for desire declines (extending work on hypothesized reactions to desire problems; Sutherland & Rehman, 2018), as well as the malleability of implicit sexual beliefs over time. With future experimental evidence of the directionality and persistence of the demonstrated effects, research could begin to assess the possibility of targeting implicit sexual beliefs to improve outcomes in couples coping with FSIAD.

Given the study design, we are also unable to determine the temporal order of implicit sexual beliefs, low desire, and levels of well-being, as the women's low desire was already present at the outset of the study. The survey at Time 2 did reveal that on average, women's desire and sexual distress naturally improved over time; future work might follow couples coping with the women's low desire over a longer period and at more regular intervals. For example, given the significant positive correlation between women with FSIAD's sexual growth beliefs and sexual desire ($r = .24, p < .05$), and the significant negative correlation between women with FSIAD's partners' sexual destiny beliefs and desire ($r = -.24, p < .05$), it is possible that research aimed at enhancing the endorsement of sexual growth beliefs (and decreasing the endorsement of sexual destiny beliefs) would be associated with increased desire over time. It is also possible that coping with a chronic sexual dysfunction could alter a person's sexual beliefs over time. Longitudinal, experimental research with more regular assessments over time could provide an appropriate test of whether people's endorsement of sexual growth and destiny beliefs change with the onset or progression of women's low desire.

A necessary next step to confirm the effectiveness, persistence, and causality of the effects would require a manipulation of the beliefs, a larger sample (and thus, higher power) followed more regularly over time, and a control group to compare effects to – elements that unfortunately were not a part of the current research. It is possible that coping with a chronic sexual dysfunction could alter a person's sexual beliefs over time, so one of the important next steps in this line of research is to understand the trajectory of sexual beliefs and sexual and relationship quality over time. Finally, our results demonstrated some counterintuitive effects that we were unable to explain with the support of empirical evidence. A valuable avenue for future research would involve a qualitative study in which participants explained these dynamics from their own perspectives. By assessing how participants make sense of their

implicit beliefs and sexual issues, we could develop a deeper understanding of how these dynamics are at play and whether there are additional underlying mechanisms that the current study could not capture.

Conclusion

Women's low sexual desire is a prevalent and distressing sexual issue that is associated with both partners' poorer well-being (Rosen et al., 2019). The current research extends past work on implicit beliefs to couples for whom implicit sexual beliefs might be especially consequential – those coping with FSIAD. The findings demonstrate that in most cases, sexual destiny beliefs are associated with lower sexual, relationship, and personal well-being when coping with the women's low desire, whereas sexual growth beliefs are linked to better well-being. Sexual growth and destiny beliefs may be important to the sexual narratives that people hold about compatibility with their partner, and also their understanding of their agency in coping with a sexual difficulty to mitigate distress (i.e., control [or lack thereof] over influencing one's sexual satisfaction). This research presents cross-sectional evidence about how implicit sexual beliefs are associated with well-being when coping with chronic low sexual desire.

Funding

This work has been supported by a Social Science and Humanities Research Council of Canada (SSHRC) graduate scholarship awarded to Stephanie Raposo, a SSHRC Insight Grant awarded to Amy Muise, a SSHRC postdoctoral fellowship awarded to Serena Corsini-Munt, and a Canadian Institutes of Health Operating Grant awarded to Natalie O. Rosen.

ORCID

Natalie O. Rosen  <http://orcid.org/0000-0002-4525-0770>
Serena Corsini-Munt  <http://orcid.org/0000-0001-5552-4387>

References

- Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Sage.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Pub.
- Bancroft, J., Graham, C. A., Janssen, E., & Sanders, S. A. (2009). The dual control model: Current status and future directions. *Journal of Sex Research, 46*(2–3), 121–142. <https://doi.org/10.1080/00224490902747222>
- Barlow, D. H. (1986). Causes of sexual dysfunction: The role of anxiety and cognitive interference. *Journal of Consulting and Clinical Psychology, 54*(2), 40–148. <https://doi.org/10.1037//0022-006x.54.2.140>
- Baumeister, R. F., & Bratslavsky, E. (1999). Passion, intimacy, and time: Passionate love as a function of change in intimacy. *Personality and Social Psychology Review, 3*(1), 49–67. https://doi.org/10.1207/s15327957pspr0301_3
- Beck, A. T., & Haigh, E. A. (2014). Advances in cognitive theory and therapy: The generic cognitive model. *Annual Review of Clinical Psychology, 10*(1), 1–24. <https://doi.org/10.1146/annurev-clinpsy-032813-153734>
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *BDI-II, Beck Depression Inventory: Manual* (2nd ed.). Harcourt, Brace, & Company.

- Bitzer, J., Giralaldi, A., & Pfafs, J. (2013). Sexual desire and hypoactive sexual desire disorder in women. Introduction and overview. Standard operating procedure (SOP Part 1). *The Journal of Sexual Medicine*, 10(1), 36–49. <https://doi.org/10.1111/j.1743-6109.2012.02818.x>
- Bodenmann, G., Ledermann, T., Blattner-Bolliger, D., & Galluzzo, C. (2006). The association between everyday stress, critical life events, and sexual dysfunction. *Journal of Nervous and Mental Disease*, 194(7), 494–501. <https://doi.org/10.1097/01.nmd.0000228504.15569.b6>
- Bohns, V. K., Scholer, A. A., & Rehman, U. (2015). Implicit theories of attraction. *Social Cognition*, 33(4), 284–307. <https://doi.org/10.1521/soco.2015.33.4.284>
- Bóthe, B., Tóth-Király, I., Demetrovics, Z., & Orosz, G. (2017). The pervasive role of sex mindset: Beliefs about the malleability of sexual life is linked to higher levels of relationship satisfaction and sexual satisfaction and lower levels of problematic pornography use. *Personality and Individual Differences*, 117, 15–22. <https://doi.org/10.1016/j.paid.2017.05.030>
- Brotto, L. A., Bitzer, J., Laan, E., Leiblum, S., & Luria, M. (2010). Women's sexual desire and arousal disorders. *The Journal of Sexual Medicine*, 7(1), 586–614. <https://doi.org/10.1111/j.1743-6109.2009.01630.x>
- Burnette, J. L., & Franiuk, R. (2010). Individual differences in implicit theories of relationships and partner fit: Predicting forgiveness in developing relationships. *Personality and Individual Differences*, 48(2), 144–148. <https://doi.org/10.1016/j.paid.2009.09.011>
- 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 & Family Therapy*, 21(3), 289–308. <https://doi.org/10.1111/j.1752-0606.1995.tb00163.x>
- Carswell, K. L., & Finkel, E. J. (2018). Can you get the magic back? The moderating effect of passion decay beliefs on relationship commitment. *Journal of Personality and Social Psychology*, 115(6), 1002–1033. <https://doi.org/10.1037/pspi0000147>
- Chiu, C., Hong, Y., & Dweck, C. S. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology*, 73(1), 19–30. <https://doi.org/10.1037/0022-3514.73.1.19>
- Derogatis, L. R., 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(2), 357–364. <https://doi.org/10.1111/j.1743-6109.2007.00672.x>
- Doss, B. D., Simpson, L. E., & Christensen, A. (2004). Why do couples seek marital therapy? *Professional Psychology: Research and Practice*, 35(6), 608–614. <https://doi.org/10.1037/0735-7028.35.6.608>
- Dweck, C. S., Chiu, C. Y., & Hong, Y. Y. (1995). Implicit theories and their role in judgments and reactions: A word from two perspectives. *Psychological Inquiry*, 6(4), 267–285. https://doi.org/10.1207/s15327965pli0604_1
- Franiuk, R., Cohen, D., & Pomerantz, E. M. (2002). Implicit theories of relationships: Implications for relationship satisfaction and longevity. *Personal Relationships*, 9(4), 345–367. <https://doi.org/10.1111/1475-6811.09401>
- 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(4), 572–583. <https://doi.org/10.1037/0893-3200.21.4.572>
- Graham, C. A., Boynton, P. M., & Gould, K. (2017). Women's sexual desire. *European Psychologist*, 22(1), 27–38. <https://doi.org/10.1027/1016-9040/a000282>
- Graziottin, A. (2007). Prevalence and evaluation of sexual health problems—HSDD in Europe. *The Journal of Sexual Medicine*, 4(3 suppl), 211–219. <https://doi.org/10.1111/j.1743-6109.2007.00447.x>
- Hayes, R. D., Dennerstein, L., Bennett, C. M., Sidat, M., Gurrin, L. C., & Fairley, C. K. (2008). Risk factors for female sexual dysfunction in the general population: Exploring factors associated with low sexual function and sexual distress. *The Journal of Sexual Medicine*, 5(7), 1681–1693. <https://doi.org/10.1111/j.1743-6109.2008.00838.x>
- Hogue, J. V., Rosen, N. O., Bockaj, A., Impett, E. A., & Muise, A. (2019). Sexual communal motivation in couples coping with low sexual interest/arousal: Associations with sexual well-being and sexual goals. *PLoS One*, 14(7), e0219768. <https://doi.org/10.1371/journal.pone.0219768>
- Job, V., Dweck, C. S., & Walton, G. M. (2010). Ego depletion—Is it all in your head? Implicit theories about willpower affect self-regulation. *Psychological Science*, 21(11), 1686–1693. <https://doi.org/10.1177/0956797610384745>
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *The analysis of dyadic data*. Guilford.
- Knee, C. R. (1998). Implicit theories of relationships: Assessment and prediction of romantic relationship initiation, coping, and longevity. *Journal of Personality and Social Psychology*, 74(2), 360–370. <https://doi.org/10.1037/0022-3514.74.2.360>
- Knee, C. R., & Canevello, A. (2006). Implicit theories of relationships and coping in romantic relationships. In K. D. Vohs & E. J. Finkel (Eds.), *Self and relationships: Connecting intrapersonal and interpersonal processes* (pp. 160–176). The Guilford Press.
- Knee, C. R., Nanayakkara, A., Vietor, N. A., Neighbors, C., & Patrick, H. (2001). Implicit theories of relationships: Who cares if romantic partners are less than ideal? *Personality and Social Psychology Bulletin*, 27(7), 808–819. <https://doi.org/10.1177/0146167201277004>
- Knee, C. R., Patrick, H., & Lonsbary, C. (2003). Implicit theories of relationships: Orientations toward evaluation and cultivation. *Personality and Social Psychology Review*, 7(1), 41–55. https://doi.org/10.1207/S15327957PSPR0701_3
- Knee, C. R., Patrick, H., Vietor, N. A., & Neighbors, C. (2004). Implicit theories of relationships: Moderators of the link between conflict and commitment. *Personality and Social Psychology Bulletin*, 30(5), 617–628. <https://doi.org/10.1177/0146167203262853>
- Laumann, E. O., Paik, A., & Rosen, R. C. (1999). Sexual dysfunction in the United States: Prevalence and predictors. *JAMA*, 281(6), 537–544. <https://doi.org/10.1001/jama.281.6.537>
- Masheb, R. M., Lozano-Blanco, C., Kohorn, E. I., Minkin, M. J., & Kerns, R. D. (2004). Assessing sexual function and dyspareunia with the Female Sexual Function Index (FSFI) in women with vulvodynia. *Journal of Sex & Marital Therapy*, 30(5), 315–324. <https://doi.org/10.1080/00926230490463264>
- Maxwell, J. A., Muise, A., MacDonald, G., & Impett, E. A. (2019). Implicit theories of sexuality scale. In R. Milhausen, J. K. Sakaluk, T. Fisher, C. M. Davis, & W. Yarber (Eds.), *The handbook of sexuality-related measures* (4th ed., pp. 103–106). Taylor & Francis.
- 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(2), 238–279. <https://doi.org/10.1037/pspi0000078>
- McNulty, J. K., Maxwell, J. A., Meltzer, A. L., & Baumeister, R. F. (2019). Sex-differentiated changes in sexual desire predict marital dissatisfaction. *Archives of Sexual Behavior*, 48(8), 2473–2489. <https://doi.org/10.1007/s10508-019-01471-6>
- McNulty, J. K., Wenner, C. A., & Fisher, T. D. (2016). Longitudinal associations among relationship satisfaction, sexual satisfaction, and frequency of sex in early marriage. *Archives of Sexual Behavior*, 45(1), 85–97. <https://doi.org/10.1007/s10508-014-0444-6>
- Metz, M. E., & Epstein, N. (2002). Assessing the role of relationship conflict in sexual dysfunction. *Journal of Sex & Marital Therapy*, 28(2), 139–164. <https://doi.org/10.1080/00926230252851889>
- Mitchell, K. R., Jones, K. G., Wellings, K., Johnson, A. M., Graham, C. A., Datta, J., Bancroft, J., Sonnenberg, P., Macdowall, W., Field, N., Mercer, C. H., & Copas, A. J. (2016). Estimating the prevalence of sexual function problems: The impact of morbidity criteria. *Journal of Sex Research*, 53(8), 955–967. <https://doi.org/10.1080/00224499.2015.1089214>
- Mitchell, K. R., Mercer, C. H., Wellings, K., & Johnson, A. M. (2009). Prevalence of low sexual desire among women in Britain: Associated factors. *The Journal of Sexual Medicine*, 6(9), 2434–2444. <https://doi.org/10.1111/j.1743-6109.2009.01368.x>
- Moyano, N., Vallejo-Medina, P., & Sierra, J. C. (2017). Sexual desire inventory: Two or three dimensions? *Journal of Sex Research*, 54(1), 105–116. <https://doi.org/10.1080/00224499.2015.1109581>

- 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*(8), 819–827. <https://doi.org/10.1037/hea0000470>
- Muise, A., Impett, E. A., Kogan, A., & Desmarais, S. (2013). Keeping the spark alive: Being motivated to meet a partner's sexual needs sustains sexual desire in long-term romantic relationships. *Social Psychological and Personality Science, 4*(3), 267–273. <https://doi.org/10.1177/1948550612457185>
- Muise, A., Kim, J., McNulty, J., & Impett, E. (2016). The positive implications of sex for relationships. In C. Knee & H. Reis (Eds.), *Positive approaches to optimal relationship development* (Advances in Personal Relationships, pp. 124–147). Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781316212653.007>
- Parish, S. J., & Hahn, S. R. (2016). Hypoactive sexual desire disorder: A review of epidemiology, biopsychology, diagnosis, and treatment. *Sexual Medicine Reviews, 4*(2), 103–120. <https://doi.org/10.1016/j.sxmr.2015.11.009>
- Pastore, L., Owens, A., & Raymond, C. (2011). Postpartum sexuality concerns among first-time parents from one U.S. academic hospital. *The Journal of Sexual Medicine, 4*(1), 115–123. <https://doi.org/10.1111/j.1743-6109.2006.00379.x>
- Rancourt, K. M., Flynn, M., Bergeron, S., & Rosen, N. O. (2017). It takes two: Sexual communication patterns and the sexual and relational adjustment of couples coping with provoked vestibulodynia. *The Journal of Sexual Medicine, 14*(3), 434–443. <https://doi.org/10.1016/j.jsxm.2017.01.009>
- Rancourt, K. M., MacKinnon, S., Snowball, N., & Rosen, N. O. (2017). Beyond the bedroom: Cognitive, affective, and behavioral responses to partner touch in women with and without sexual problems. *Journal of Sex Research, 54*(7), 862–876. <https://doi.org/10.1080/00224499.2016.1217297>
- Raposo, S., Rosen, N. O., & Muise, A. (2020). Self-expansion is associated with greater relationship and sexual well-being for couples coping with low sexual desire. *Journal of Social and Personal Relationships, 37*(2), 602–623. <https://doi.org/10.1177/0265407519875217>
- Robins, R. W., & Pals, J. L. (2002). Implicit self-theories in the academic domain: Implications for goal orientation, attributions, affect, and self-esteem change. *Self and Identity, 1*(4), 313–336. <https://doi.org/10.1080/15298860290106805>
- 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. *The Journal of Sexual Medicine, 16*(1), 83–95. <https://doi.org/10.1016/j.jsxm.2018.10.018>
- 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. *The Journal of Sexual Medicine, 12*(4), 1028–1039. <https://doi.org/10.1111/jsm.12840>
- Rosen, R. C., Brown, C., Heiman, J., Leiblum, S., Meston, C., Shabsigh, R., & D'Agostino, R. J. (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*(2), 191–208. <https://doi.org/10.1080/009262300278597>
- Rosen, R. C., Riley, A., Wagner, G., Osterloh, I. H., Kirkpatrick, J., & Mishra, A. (1997). The international index of erectile function (IIEF): A multidimensional scale for assessment of erectile dysfunction. *Urology, 49*(6), 822–830. [https://doi.org/10.1016/S0090-4295\(97\)00238-0](https://doi.org/10.1016/S0090-4295(97)00238-0)
- 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*(6), 1549–1560. <https://doi.org/10.1111/j.1743-6109.2009.01252.x>
- 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*(6), 1733–1743. <https://doi.org/10.1007/s10508-018-1146-2>
- Schmiedeberg, C., & Schröder, J. (2016). Does sexual satisfaction change with relationship duration? *Archives of Sexual Behavior, 45*, 99–107. <https://doi.org/10.1007/s10508-015-0587-0>
- Seligman, M. E., & Maier, S. F. (1967). Failure to escape traumatic shock. *Journal of Experimental Psychology, 74*(1), 1–9. <https://doi.org/10.1037/h0024514>
- Shallcross, R., Dickson, J. M., Nunns, D., Mackenzie, C., & Kiemle, G. (2018). Women's subjective experiences of living with vulvodynia: A systematic review and meta-ethnography. *Archives of Sexual Behavior, 47*(3), 577–595. <https://doi.org/10.1007/s10508-017-1026-1>
- Sims, K. E., & Meana, M. (2010). Why did passion wane? A qualitative study of married women's attributions for declines in sexual desire. *Journal of Sex & Marital Therapy, 36*(4), 360–380. <https://doi.org/10.1080/0092623X.2010.498727>
- Spector, I. P., Carey, M. P., & Steinberg, L. (1996). The Sexual Desire Inventory: Development, factor structure, and evidence of reliability. *Journal of Sex & Marital Therapy, 22*(3), 175–190. <https://doi.org/10.1080/00926239608414655>
- Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1968). *State-Trait Anxiety Inventory (STAI): Test manual for form X*. Consulting Psychologists Press.
- Stephenson, K. R., & Meston, C. M. (2010). When are sexual difficulties distressing for women? The selective protective value of intimate relationships. *Journal of Sexual Medicine, 7*(11), 3683–3694. <https://doi.org/10.1111/j.1743-6109.2010.01958.x>
- Sutherland, S., & Rehman, U. S. (2018). Viewing sexual desire as stable versus fluid: The impact of implicit beliefs on women's coping with sexual desire problems. *Journal of Sex & Marital Therapy, 44*(4), 410–420. <https://doi.org/10.1080/0092623X.2017.1405306>
- Tiefer, L., Laan, E., & Basson, R. (2015). Missed opportunities in the patient-focused drug development public meeting and scientific workshop on female sexual dysfunction held at the FDA, October 2014. *Journal of Sex Research, 52*(6), 601–603. <https://doi.org/10.1080/00224499.2014.1003362>
- Toates, F. (2009). An integrative theoretical framework for understanding sexual motivation, arousal, and behavior. *Journal of Sex Research, 46*(2–3), 168–193. <https://doi.org/10.1080/0022449902747768>
- Whitehead, A. N. (1938). *Modes of thought*. Macmillan.
- Witting, K., Santtila, P., Varjonen, M., Jern, P., Johansson, A., Von Der Pahlen, B., & Sandnabba, K. (2008). Couples' sexual dysfunctions: Female sexual dysfunction, sexual distress, and compatibility with partner. *The Journal of Sexual Medicine, 5*(11), 2587–2599. <https://doi.org/10.1111/j.1743-6109.2008.00984.x>