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## Why is impaired sexual function distressing to women? The primacy of pleasure in female sexual dysfunction

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### Abstract

**Introduction**—Recent research has highlighted a complex association between female sexual function and subjective distress regarding sexual activity. These findings are difficult to explain given limited knowledge as to the mechanisms through which impaired sexual function causes distress.

**Aim**—The current study assessed whether a number of specific consequences of impaired sexual function, including decreased physical pleasure, disruption of sexual activity, and negative partner responses, mediated the association between sexual function and distress.

**Methods**—Eighty seven women in sexually active relationships reporting impairments in sexual function completed validated self-report measures and daily online assessments of sexual experiences.

**Main Outcome Measures**—Participants completed the Sexual Satisfaction Scale for Women (SSS-W), the Female Sexual Function Index (FSFI), and the Measure of Sexual Consequences (MSC).

**Results**—Results suggested that decreased physical pleasure and disruption of sexual activity, but not partner responses, statistically mediated the association between sexual function and distress.

**Conclusion**—Sexual consequences represent potential maintaining factors of sexual dysfunction that are highly distressing to women. Results are discussed in the context of theoretical models of sexual dysfunction and related treatments.

### Keywords

Sexual distress; sexual function; female sexual dysfunction

### Introduction

Impaired sexual function, including low sexual desire/arousal, difficulty reaching orgasm, and the presence of sexual pain, has been reported by approximately 58% of women in the United States in the past year<sup>1</sup>. This prevalence is higher than that of depression<sup>2</sup>, social anxiety<sup>3</sup>, and other common forms of psychopathology. Given that sexuality is an important

component of overall quality of life<sup>4</sup>, it is important to develop a comprehensive understanding of sexual dysfunction, along with effective treatments for sexual problems.

However, these goals are difficult to achieve given limited knowledge regarding basic processes underlying sexual dysfunction. One of these processes is how and why impairments in sexual function give rise to subjective distress regarding one's sex life. A number of studies have suggested the existence of a complex relationship between women's sexual function and their subsequent affective responses. In many cases, women report significantly impaired sexual function without notable levels of subjective distress<sup>5</sup>. For example, Rosen and colleagues<sup>6</sup> found that, although rates of low sexual desire rise with age, rates of *distress* regarding low desire decrease in older age. In other cases, women report high levels of distress regarding sexual function in the absence of severe impairments in sexual function. For example, Stephenson and colleagues<sup>7</sup> found that women with a history of childhood sexual abuse reported high levels of distress regarding their sexual function, even in the context of high levels of desire and arousal. This variation in the association between sexual function and subjective distress is difficult to fully explain because it is unclear *why* impaired sexual function gives rise to distress in some cases and not in others. In other words, what is the mechanism through which sexual function affects distress levels?

Barlow's model of sexual dysfunction<sup>8</sup> outlines various relationships among sexual function, attention, and affect. The model posits that individuals with sexual dysfunction enter into sexual situations with negative affect and expectancies, and that their attentional focus is subsequently drawn to non-erotic stimuli including external stressors, body image concerns, and the consequences of perceived poor sexual performance. This focus on non-erotic stimuli during sexual activity is thought to increase anxiety and maintain low levels of arousal through distraction, resulting in continued poor performance and later avoidance of erotic cues and sexual situations. Barlow's model has strongly influenced research on sexual dysfunction; in particular, its focus on anxiety and attentional focus has guided the creation of effective treatments utilizing systematic desensitization<sup>9</sup> and mindfulness meditation<sup>10</sup>.

Barlow's model describes the link between sexual function and subjective distress in particular using one primary mechanism: avoidance. Essentially, impaired sexual function gives rise to later behavioral and/or experiential avoidance, and this avoidance maintains the negative affect and expectancies that initiate the dysfunctional sexual cycle during subsequent sexual experiences. The role of avoidance is thought to be essential in maintaining the circular and self-reinforcing nature of the model. Avoidance following a negative experience has been identified as a key maintaining factor of negative affect in a wide range of disorders by preventing new learning that would correct the overestimation of likelihood and/or severity of feared outcomes<sup>11</sup>. Similarly, after an initial negative sexual experience, avoidance can prevent new learning regarding the benign nature of impaired sexual function, thus maintaining distress and anxiety regarding sexual activity. However, a number of common clinical presentations are difficult to reconcile with this model. First, many women who experience impaired sexual function continue to engage in high levels of sexual activity and attend to erotic cues, meaning that avoidance may not be the only mechanism through which sexual distress is maintained. Second, many instances of non-

distressing impaired sexual function are maintained for long periods of time, which runs counter to the theoretical model in which negative affect entering sexual activity initiates the sexually dysfunctional cycle. Lastly, although the model specifies that consequences of impaired sexual function draw attention away from helpful erotic cues (e.g., pleasure), we are aware of little research that specifies what these consequences are, or which are most distressing to the individual.

Expansions of Barlow's model have been suggested a number of times<sup>12</sup>, especially to take into account interpersonal contextual factors of sexual activity<sup>13</sup>. We propose that the aspects of this model that outline the link between impaired sexual function and subsequent negative affect may benefit from similar expansion. In particular, an alternative or additional mechanism that maintains distress regarding sexual activity may be the repeated experience of legitimate negative consequences of impaired sexual function. In other words, impaired sexual function may *not* be benign in many cases, but rather may result in distressing consequences such as disruption of sexual activity and/or conflict with the sexual partner. In these cases, sexual distress may be maintained through repeatedly learning that sexual activity is, in fact, an emotionally threatening environment, rather than failing to learn that it is not.

This potential maintaining factor of sexual distress is important in that it may suggest a distinct locus of "pathology" and, as such, may lend itself to different treatment aims. For example, if a woman's low arousal during sex prevents the couple from engaging in sexual activity and causes her partner to express anger towards her, a clinician may be best served by addressing the couple's sexual script<sup>14,15</sup> and general patterns of conflict, rather than attempting to decrease the woman's level of anxiety and avoidance of sexual activity. In other words, the woman's impaired sexual function may be *accurately* viewed as threatening and it would be the context of the dysfunction in need of alteration, rather than the internal cognitive processes of cognitions (thoughts) within the individual. Indeed, Bancroft and colleagues<sup>16</sup> have proposed a similar distinction, suggesting that many sexual difficulties may be adaptive responses to negative relational contexts, rather than individual psychopathologies per se. The inclusion of both personal and interpersonal negative consequences of sexual difficulties may help current theoretical models account for this variability in factors that may cause and maintain sexual dysfunction.

## Aim

The aim of the current study was to begin exploring the negative consequences of impaired sexual function that may maintain subjective distress regarding sexual activity in women. We focused on a number of specific and immediate consequences including decreased physical pleasure, prevention/disruption of sexual activity, impairment of the partner's sexual experience (e.g., decreased pleasure for partner), and negative emotional responses from the partner including sadness, disappointment, and frustration. In an earlier analysis of a portion of the current sample<sup>17</sup>, each of these consequences were endorsed by women with recurrent impairments in sexual function, and the frequency of each consequence was significantly correlated with levels of sexual distress. The goal of the current analyses was to assess whether these consequences accounted for the statistical association between sexual

function and subjective distress regarding sexual activity. We hypothesized that the frequency and severity of negative consequences would mediate the association between levels of sexual function and sexual distress. This finding would support the notion that these consequences represent a potential mechanism through which impaired sexual function gives rise to high levels of negative affect, maintaining chronic sexual dysfunction.

## Method

### Participants and procedures

Ninety participants were recruited from the community via online and paper advertisements in an American southern metropolitan area. The advertisements stated that participants needed to be female, currently in a monogamous heterosexual relationship, over the age of 18, and experiencing one or more of the following sexual difficulties in the past month: low sexual desire, low sexual arousal, difficulty reaching orgasm, or pain/ discomfort during or following sexual activity. Women who expressed interest were screened by phone and excluded if they were unwilling to engage in sexual activity during the following month, were not healthy enough to engage in sexual activity, expressed a serious aversion to sex, or had an untreated serious mental health condition (schizophrenia, bipolar, and/or severe depression that was not managed with therapy and/or medication). It is important to note that participants only needed to report significant impairments in sexual function to be included in the study – they did not need to report significant subjective distress.

Participants completed an intake session at the Sexual Psychophysiology Lab at The University of Texas at Austin which included a semi-structured interview to assess for sexual dysfunction based on DSM-IV-TR<sup>18</sup> criteria performed by a Masters-level clinician and a number of validated self-report measures. Information regarding birth control and children was not systematically collected. Following this intake, participants completed online measures assessing their sexual experiences once a day for four weeks in which they agreed to attempt to engage in sexual intercourse with their partner at least five times (to allow for a sufficient number of data points). Following this period, participants were provided with information regarding female dysfunction, treatment referrals, and monetary compensation. All study protocol was approved by the University of Texas Institutional Review Board.

Of the 90 women who attended the intake assessment, three were excluded for not meeting inclusion criteria, resulting in a final sample of 87 women. The final sample had an average age of 27.4 years ( $SD = 6.74$  years) and was 80% Caucasian, 14% Hispanic, 7% Asian American, 5% African American, and 2% Multi-racial. Twenty eight percent reported being married, with the remaining women reporting monogamous heterosexual romantic relationships. The average length of relationship was 45.6 months ( $SD = 63.38$  months). Twenty six percent reported having earned a graduate degree, 40% had an undergraduate degree, 31% had completed some college, and 2% reported a high school diploma only. Although not an inclusion criterion, a majority of participants met full criteria for sexual dysfunction as specified by Basson and colleagues<sup>19</sup> (i.e., reported both impaired sexual function and significant personal or interpersonal distress). Specifically, 31 participants met criteria for Hypoactive Sexual Desire Disorder, 21 for Female Sexual Arousal Disorder

(FSAD) -subjective subtype, 13 for FSAD-physiological subtype, 27 for Female Orgasmic Disorder, and 17 for dyspareunia or vaginismus<sup>1</sup>.

### Intake measures

**Sexual distress**—The Sexual Satisfaction Scale for Women (SSS-W<sup>20</sup>) is a 30-item self-report measure that provides scores on five domains of sexual well-being. The full-scale and each of the domain scores have been shown to reliably discriminate between women with and without sexual dysfunction. The personal concern subscale was used as the primary measure of sexual distress in the current study. Participants reported a mean of 15.75 (SD = 5.26) with a possible range of 6-30 (lower scores indicate more distress). Cronbach's alpha in the current sample was .83.

**Sexual function**—The Female Sexual Function Index (FSFI<sup>21</sup>) is a 19-item questionnaire that is subdivided into 6 domains: desire, mental arousal, physical arousal (lubrication), orgasm, satisfaction, and sexual pain. The FSFI has been shown to differentiate between women with and without female sexual arousal dysfunction<sup>21</sup>. In the current sample, participants reported a mean FSFI score of 22.63 (SD = 5.40), with a possible range of 2-36 (lower scores indicate more impaired sexual function). Cronbach's alphas were .93 for desire, .99 for arousal, .94 for lubrication, .89 for orgasm, .88 for satisfaction, and .87 for pain.

**Sexual consequences**—Sexual consequences were assessed using the Measure of Sexual Consequences (MSC<sup>17</sup>), which includes 11 Likert items assessing the frequency of various potential negative consequences of impaired sexual function. Consequences include decreased physical pleasure for self or partner, increased physical discomfort for the partner, less sexual desire from the partner, disruption of sexual activity, decreased frequency of sexual activity, and negative emotional reactions from the partner including expression of sadness, anger, or doubts about the relationship. Responses range from 1 (Never happens as a result of my sexual difficulties) to 5 (Always happens as a result of my sexual difficulties) and the full-scale score is obtained by summing individual items. Previous analyses have shown that the MSC is internally reliable (Cronbach's  $\alpha = 0.81$ ) and normally distributed. Convergent and discriminant validity has been established using measures of sexual, relational, and life satisfaction, and the scale differentiates between women with and without sexual dysfunction<sup>17</sup>. In the current sample, participants reported a mean score of 24.74 (SD = 7.93) with a possible range of 11-55 (higher scores indicate more frequent negative sexual consequences). Additional descriptive statistics for the MSC can be found in Tables I and II.

### Daily Measures

Daily sexual function, sexual consequences, and sexual distress were measured using single items wherever possible to reduce participant burden. For example, sexual distress was measured with the item, "My sexual difficulties today were distressing to me personally." Some items from the MSC were not included in daily measures because they did not make

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<sup>1</sup>Diagnosis of sexual pain conditions requires a physical examination, which was beyond the scope of the current study. As such, these diagnoses should be considered very tentative.

logical sense to ask on a daily basis (e.g., decreased frequency of sex). Daily consequences were measured with items asking the degree of agreement with statements describing each consequence; e.g., “My sexual difficulties today caused me to feel less physical pleasure during sex.” These items were scored on a 1-5 Likert Scale of severity ranging from strongly disagree to strongly agree.

The daily data consisted of a total of 1,793 reports (an average of 20.61 per participant). Given our goal of exploring the immediate consequences of impaired sexual function in the context of partnered activity, and the fact that a number of consequences assessed are relevant primarily in the context of vaginal intercourse (e.g., the male partner experiencing physical discomfort), only data from days on which vaginal intercourse was reported was used. This criteria provided a total of 429 reports, an average of 4.93 per participant. All consequences were reported to at least some degree (i.e., a score greater than 1), with decreased physical pleasure being the most common (reported during 80% of sexual episodes) and the partner expressing doubts about the relationship being the least common (reported during 8% of sexual episodes).

## Results

### Data Analysis

Two sets of analyses were performed. The first (cross-sectional) utilized responses from intake assessments and the second (repeated-measures) utilized responses from daily online assessments. The aim of both sets of analyses was to assess the indirect effect of sexual function on sexual distress through its association with sexual consequences. Initial models were constructed using the summed score of all sexual consequences, with subsequent models assessing each individual consequence in turn. Cross-sectional models were tested using Preacher and Hayes<sup>22</sup> method which provides estimates of each mediational pathway and a bootstrapped confidence interval of the size of the total indirect effect of the independent (sexual function) variable on the dependent variable (sexual distress) through the mediating variable (sexual consequences). Five thousand resamples were used to obtain bootstrapped confidence intervals.

Repeated measures models wherein daily measures of sexual function, consequences, and distress were nested within persons were tested using Bauer, Preacher, and Gil's<sup>23</sup> recommendations for evaluating indirect effects in the context of multi-level models. This method utilizes two component equations, one in which the mediator variable is the outcome and another in which the dependent variable is the outcome. These component equations are combined into a single equation through the use of indicator variables, allowing for the estimation of all components of the indirect effect (path a, path b, and the covariance of paths a and b simultaneously). As with all multi-level models, this method also accounts for error variance at both the event level (level 1) and person level (level 2).<sup>2</sup> Person-centered variables were used in these analyses, meaning that daily scores of all measures indicated deviations from each individual's average score on that variable. This was done in an attempt to specifically assess within-person covariation between factors, a conservative measure of the entire mediational pathway within individuals.<sup>3</sup>

### Cross-sectional indirect effect models

The indirect effect of sexual function on distress through the consequences was significant (99% CI = .08, .46) and the direct statistical effect of sexual function on distress ( $\beta = .44$ ,  $p < .001$ ) was significantly weakened when controlling for frequency of negative sexual consequences ( $\beta = .23$ ,  $p < .05$ ). To more fully elucidate this indirect effect, we proceeded to test the frequency of each consequence individually as a mediator. The statistical association between sexual function and distress was significantly mediated by decreased physical pleasure (99% CI = .04, .52; association reduced to  $\beta = .22$ , ns), decreased frequency of sexual activity (99% CI = .01, .37; association reduced to  $\beta = .29$ ,  $p < .05$ ), decreased physical pleasure for the partner (99% CI = .01, .34; association reduced to  $\beta = .31$ ,  $p < .01$ ), and disruption of sexual activity (95% CI = .01, .27; association reduced to  $\beta = .35$ ,  $p < .01$ ). See table III for examples of indirect effects models. Negative partner emotional responses did not exhibit significant mediation, nor did decreased partner desire for sex.

### Multi-level indirect effect models

Sexual consequences significantly mediated the association between daily sexual function and sexual distress (95% CI = .01, .25). The effect of sexual function on sexual distress ( $\beta = .41$ ,  $p < .001$ ) was significantly weakened when controlling for sexual consequences ( $\beta = .24$ ,  $p < .01$ ). We then assessed each consequence individually as a mediator. Only decreased physical pleasure exhibited significant mediation (95% CI = .02, .17). The effect of sexual function on sexual distress ( $\beta = .41$ ,  $p < .001$ ) was significantly weakened when controlling for decreased physical pleasure alone ( $\beta = .20$ ,  $p < .01$ ).

## Discussion

The goal of the current project was to determine whether a number of specific consequences of impaired female sexual function statistically mediated the association between sexual function and level of subjective distress. Results suggested that the degree to which impaired sexual function decreased women's physical pleasure, prevented them from engaging in sexual activity, and decreased their partner's pleasure accounted for a significant portion of the effect of sexual function on sexual distress. Although far from conclusive, these results are consistent with the hypothesis that sexual consequences may be an important maintaining factor of sexual dysfunction and, in some cases, may explain why impaired sexual function is distressing to women.

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<sup>2</sup>Given that multiple data points were collected within individuals over time, we also considered the possibility that within-subject errors were auto-correlated. We specified a continuous first-order autoregressive covariance structure, which is often appropriate when the multiple observations within individuals are not evenly spaced (as was the case in the current data set). Given that observations were almost always separated by more than one day (and often weeks), we did not predict a high degree of autocorrelation (any carry-over effects from day to day would be unlikely to last until the next sexual episode). This assumption was generally supported. Autoregressive coefficients ( $\Phi$ ) generally ranged from .18 to .20 (possible range: -1 to 1) and the use of an autoregressive covariance structure generally resulted in slightly higher AIC values, indicating worse model fit. Thus, we retained the results from analyses utilizing standard covariance structures.

<sup>3</sup>While we considered using time-series analysis or other analytic methods utilizing lagged scores to assess temporal sequencing, these methods seem inappropriate given our aims in the current study. The proposed mediational sequence takes place *within* a single sexual episode: impaired sexual function gives rise immediately to specific consequences which then engender a state of distress. This is distinct from a sequence that would take place across multiple episodes, i.e., that impaired sexual function at time 1 influences sexual consequences at time 2, which then engender distress at time 3. Indeed, our measures requested that participants specifically report on their experiences of sexual activity during the *current day* only. As such, it was not possible to establish temporal precedence between factors in the context of the current study.

In particular, our results highlighted that decreases in physical pleasure (one of the primary motives for engaging in sexual activity<sup>24</sup>) was consistently experienced by participants, and that this consequence of impaired sexual function may represent a key mechanism through which impaired sexual function impacts levels of negative affect. While this conclusion may seem like a truism, it is important to note that decreased physical pleasure during sexual activity stems in many cases from factors such as limited knowledge regarding sexual anatomy and rigid sexual scripts<sup>15</sup>, rather than intrapersonal processes such as behavioral or experiential avoidance of erotic cues. As such, it is quite possible for decreased pleasure and other negative sexual consequences to exist independently from the mechanisms posited to maintain the association between sexual function and distress in Barlow's<sup>8</sup> model. This range of mechanisms may benefit from expansion to include the sexual consequences measured in the current study.

Interestingly, perceived partner emotional response did not significantly mediate the association between sexual function and distress. While any null results must be interpreted cautiously, it is important to mention one possible reason for this outcome: negative partner responses rarely happened. While participants reported at intake that their partners did occasionally respond in a variety of negative ways to their impairments in sexual function, the daily measures included few reports of these responses. For example, on similar 1-5 likert scales, participants reported at intake that the average frequency of their partners expressing negative emotions towards themselves as a 2.52, however, the mean score of this event happening on any particular day was 1.55 with 1 being not at all. Thus, it is possible that, when recalling their experiences over the previous month, even rare disparaging remarks from partners were important and thus easily recalled whereas other less threatening consequences such as decreased pleasure were more easily forgotten.

These results have the potential to inform how providers conceptualize the treatment of sexual dysfunction. In particular, it is important to note that decreased pleasure and disruption of sexual activity are common, but not inescapable, consequences of impaired sexual function. To the degree to which decreased pleasure and other negative consequences can be separated from sexual function, it may be possible to decrease the degree to which impaired sexual function is distressing to the individual, reducing anxiety surrounding sexual activity. Indeed, this goal of disentangling impaired sexual function from its common negative sequelae is a major component of one of the most studied treatments of sexual dysfunction: sensate focus.

Sensate focus is a couples-based method of sex therapy<sup>25</sup> in which partners progress through a hierarchy of exercises with the aims of increasing partners' knowledge of each other's sexual preferences, decreasing anxiety associated with sexual activity, and redefining sexual activity as a present-focused appreciation of physical pleasure and intimacy. Sensate focus is one of the most-studied forms of sex therapy and has been supported in a number of empirical studies<sup>9,26</sup>. However, we are aware of no empirical studies which have tested potential mechanisms which engender alleviation of symptoms. While not explicitly addressing sensate focus, the current project suggests that one viable mechanism of this treatment is the degree to which it reduces the negative consequences of impaired sexual function.

For example, one of the most initially counter-intuitive aspects of sensate focus exercises is the instruction to *not* become sexually aroused<sup>27</sup>. In fact, in some exercises, the couple is instructed to discontinue stimulation of the genitals (though not pleasurable touching in general) if the individual being touched becomes aroused and continue again once this arousal has subsided. In effect, this process explicitly disconnects physical pleasure from sexual arousal, showing the couple that decreases in arousal need not end, nor even significantly decrease, the experience of physical pleasure during sexual activity. One of the outcomes of these exercises is to vastly reduce a wide range of negative consequences of decreases in arousal. Indeed, arousal is purposely kept inhibited and the negative consequences that can result from this experience, such as decreased pleasure, disruption of sexual activity, and negative partner responses, are partialled out and replaced with positive consequences such as continued pleasure, emotional intimacy, and communication. The current results suggest that the removal of these consequences may make sexual impairments less distressing, decreasing the pressure and anxiety associated with sexual activity, leading to natural improvements in sexual function over time. To our knowledge, the current study represents the first empirical support for these specific processes thought to underlie sensate focus.

The current study had a number of limitations. First and foremost, this was a correlational study meaning that no variables were directly manipulated. As such, we cannot make any confident conclusions regarding either the existence or direction of causal relationships between variables. Although our daily diary methodology helped to rule out a large number of static “third variables,” additional factors that covary with sexual function, consequences, and distress may explain the direct and indirect statistical effects identified in the current study. To draw firm conclusions regarding causal relationships as suggested here, experimental manipulation will be necessary.

A second major limitation of the current study is that key variables were measured by a recently constructed scale – the MSC. While we have established the basic reliability and validity of this scale<sup>17</sup>, additional research using this measure would result in increased knowledge about its strengths and limitations, allowing for increased confidence regarding the current results. A number of aspects of the sample also limit the generalizability of our conclusions. Older women (over age 50) and women with only a high school education or less were poorly represented in the sample. While this is a limitation common to much research in the social sciences, it is of special concern in the current study given the established relationship between both age and education level and sexual function<sup>6,28</sup>. In particular, women with more education have been found to be at lower risk for distressing sexual problems<sup>28</sup> and, as such, our sample may represent a unique subset of women within this relatively protected population. It would be interesting for future research to explicitly test for differences between women with differing levels of education in regards to mechanisms underlying sexual distress. For example, are there qualitative differences in how different types of external stress (paying bills with a low-income position vs. long hours and high stress in a high-income position) impact sexual function and distress, or are the mechanisms similar (e.g., decreased energy, distraction, etc.)?

Additionally, in order to explore a wide range of sexual consequences, we limited our sample to women who were currently engaging in vaginal intercourse with a male partner. As such, the results may not apply to women who have sex with women, or women who are not willing or able to engage in vaginal intercourse. In particular, women who can't or will not engage in intercourse with their partners may experience the consequences measured in the current study more frequently, or may be more distressed by them. As such, it will be important for future research to specifically target this group to assess the generalizability of the current findings. Also, due to practical constraints, we did not directly assess the partners' experiences in the current study. Assessment of the partner's emotional and behavioral reactions (as well as sexual dysfunction on the part of the partner) would surely add to the richness of our models and resulting understanding of the interpersonal context of sexual activity.

Lastly, we did not differentiate between groups of participants with different diagnoses of sexual dysfunction. The reasoning behind this choice was two-fold. First, rates of comorbidity between different diagnoses have been shown to be quite high, potentially due to shifting diagnostic criteria<sup>29</sup> and/or shared etiological factors<sup>30</sup>. So, it is not surprising that there was a high degree of diagnostic overlap in the current sample. For example, 57% of participants meeting criteria for female sexual arousal disorder also met criteria for hypoactive sexual desire disorder. Indeed, these two diagnoses have been combined in the latest version of the DSM. Thus, women who meet criteria for only one diagnosis would be a relatively unrepresentative sample. Second, in practical terms, we did not have enough statistical power to adequately assess our models using only participants with a single diagnosis. It would certainly be interesting for future research to recruit participants with specific dysfunctions and test for differences in the effects described here.

Despite these limitations, the current study suggests that impaired female sexual function may be distressing primarily because it prevents the experience of sexual pleasure and/or prevents sex altogether for some women. These findings may be helpful in explaining variability in the association between sexual function and distress<sup>16,31</sup>, and in expanding Barlow's model of sexual dysfunction<sup>8</sup> to more fully address cases in which contextual factors (such as ineffective coping techniques used by the couple, or a volatile emotional environment in the relationship) rather than individual processes (such as avoidance of sexual cues) are the primary maintaining factors of sexual distress. Additionally, these findings highlight the importance of physical pleasure in the context of recurrent sexual difficulties, adding to our understanding of the factors that may be most important to patients being treated for sexual dysfunction.

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**Table I**

Sexual consequences means and standard deviations at intake. N=87

<b>Consequence</b>	<b>Mean Frequency</b>	<b>SD</b>	<b>Number reporting</b>	<b>% reporting</b>
Less Pleasure	3.76	1.08	86	99
Sex Disrupted	2.36	1.16	63	72
Decreased Frequency of Sex	3.28	1.44	72	83
Partner Sadness	2.52	1.19	67	77
Partner Negative Emotions Towards Self	2.18	1.17	56	64
Partner Anger	1.51	1.51	28	32
Partner Relational Doubts	1.55	1.55	25	29
Partner Decreased Pleasure	2.43	1.26	60	69
Partner Discomfort	1.43	0.76	25	29
Partner Less Desire	2.01	1.18	46	53
Partner Pressure to Have Sex	1.88	1.25	36	41
Total Consequences	24.74	7.93		

Note: Items responses ranged from 1 (Never Happens) to 5 (Always Happens)

**Table II**

Sexual consequences means and standard deviations – daily. N=87

<b>Consequence</b>	<b>Mean Frequency</b>	<b>SD</b>	<b>% of time reported &gt; 1</b>
Less Pleasure	3.18	1.44	80
Sex Disrupted	1.77	1.29	33
Partner Sadness	1.55	1.08	24
Partner Decreased Pleasure	2.38	1.26	38
Partner Negative Emotions Towards Self	1.37	.90	18
Partner Anger	1.22	.69	11
Partner Relational Doubts	1.14	.51	08
Partner Discomfort	1.26	0.72	15
Total Consequences	13.31	5.25	

Note: Items responses ranged from 1 (Strongly Disagree) to 5 (Strongly Agree)

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Table III

## Cross-sectional indirect effects models

<b>Mediator - Total Consequences</b>				
<b>Effect</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>t Value</b>	<b>Significance</b>
b (YX)	0.51	0.12	4.18	***
b (MX)	-0.81	0.18	-4.47	***
b (YM*X)	-0.3	0.07	-4.44	***
b (YX*M)	0.26	0.12	2.14	*

  

<b>95% confidence interval</b>				
<b>Effect</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>Lower</b>	<b>Upper</b>
Indirect Effect	0.24	0.07	0.12	0.4

  

<b>Mediator - Decreased Physical Pleasure</b>				
<b>Effect</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>t Value</b>	<b>Significance</b>
b (YX)	0.52	0.12	4.41	***
b (MX)	-0.14	0.02	-6.1	***
b (YM*X)	-1.91	0.56	-3.42	**
b (YX*M)	0.27	0.14	1.97	*

  

<b>95% confidence interval</b>				
<b>Effect</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>Lower</b>	<b>Upper</b>
Indirect Effect	0.26	0.1	0.1	0.44

  

<b>Mediator - Disruption of Sexual Activity</b>				
<b>Effect</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>t Value</b>	<b>Significance</b>
b (YX)	0.53	0.12	4.41	***
b (MX)	-0.11	0.03	-4.33	***
b (YM*X)	-1.1	0.51	-2.02	*
b (YX*M)	0.41	0.13	3.17	**

  

<b>95% confidence interval</b>				
<b>Effect</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>Lower</b>	<b>Upper</b>
Indirect Effect	0.12	0.07	0.01	0.27

\*\*\*  
p<.001

\*\*  
p<.01

\*  
p<.05