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Female Sexual Pain Disorders and Cognitive Behavioral Therapy

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Female sexual pain disorders are prevalent and have a deleterious effect on women's well-being. Because there are psychological elements to this pain, cognitive-behavioral therapy (CBT) may be a viable treatment alternative, particularly when compared to more physically invasive treatments such as surgery or medication. This article provides a critical analysis of research studies in this area by evaluating each study in detail, identifying gaps in the research base, and providing directions for future study. For the most part, all of the studies reviewed in this article found CBT to be effective. However, CBT modalities with minimal therapist direction or interaction were found to be problematic. In addition, there may be other noninvasive treatment types that are equally or more effective, such as biofeedback or supportive psychotherapy.

Female sexual pain disorders are important to study because they can negatively affect both a woman's well-being and her romantic relationships. Despite the consequences of the disorders, there is a dearth of research on the topic. Of what is available, cognitive-behavioral therapy (CBT) interventions appear to be the most frequently studied, possibly because CBT addresses the psychological elements of pain. The purpose of this article is to provide a rationale for the use of CBT, provide a critical analysis of these research studies by evaluating each study in detail, and identify gaps in the research base.

Sexual pain disorders are defined in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev. [DSM-IV-TR]; American Psychiatric Association [APA], 2000) as either dyspareunia or vaginismus. Dyspareunia is defined by the DSM-IV-TR as "(A) Recurrent or persistent genital pain associated with sexual intercourse in either a male or a female; (B) The disturbance causes marked distress or interpersonal difficulty; (C) The disturbance is not caused exclusively by Vaginismus or lack of lubrication, is not better accounted for by another Axis I disorder (except another Sexual Dysfunction), and is not due exclusively to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition" (p. 556). Vulvodynia, pain in the vulva, and its subtype, provoked vestibulodynia (also referred to as vulvar vestibulitis), pain in the vulvar vestibule area, are both types of dyspareunia. Although the definition

of dyspareunia includes males, this article only addresses research with females.

Vaginismus is defined by the DSM-IV-TR as "(A) Recurrent or persistent involuntary spasm of the musculature of the outer third of the vagina that interferes with sexual intercourse; (B) The disturbance causes marked distress or interpersonal difficulty; (C) The disturbance is not better accounted for by another Axis I disorder (e.g., Somatization Disorder) and is not due exclusively to the direct physiological effects of a general medical condition" (APA, 2000, p. 558).

Although they are separately defined in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; APA, 1994), because many researchers think that vaginismus and dyspareunia are related and because they contain many of the same features, they are discussed as one condition. Specifically, the involuntary contracture of the pelvic floor, the distinguishing feature of vaginismus, could be a reaction to a pain condition (Backman, Widenbrant, Bohm-Starke, & Dahlöf, 2008) and may also play a role in maintaining the pain (Bergeron & Lord, 2003). Thus, vaginismus can be a reaction to dyspareunia and can interfere with the treatment of dyspareunia. In fact, Bergeron and Lord (2003) reported that they are so closely related they really mean the same thing.

Importance and Prevalence

Female sexual pain disorders are both important for women's well-being and prevalent. Researchers have found that sexual satisfaction can have a significant, positive effect on women's overall happiness (Blanchflower & Oswald, 2004; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004; Laumann et al.,

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2006). Sexual frequency can also have a significant, positive effect on happiness (Blanchflower & Oswald, 2004). Thus, it follows that a reduction in sexual satisfaction may lead to a reduction in overall well-being and general happiness (Laumann et al., 2006). In addition, Kahneman et al. (2004) found that out of the common activities that women perform, sex was rated as providing the most pleasure. Because female sexual pain disorders can prevent or reduce frequency of sexual activity or negatively impact satisfaction, they can have a deleterious effect on women's overall happiness and well-being.

Dyspareunia appears to be prevalent, although estimates vary according to study. One study found 60% of women have experienced dyspareunia at some point in their lives, with 33% experiencing persistent pain (Glatt, Zinner, & McCormack, 1990). Yet, other studies report lower numbers (i.e., 14.4%; Anastasiadis, Davis, Ghafar, Burchardt, & Shabsigh, 2002) and ranges (from 3% to 18%; Simons & Carey, 2001). One possible explanation for these divergent numbers is that prevalence rates vary by age group and culture (Anastasiadis et al., 2002). Vaginismus also appears to be prevalent, with 15% to 17% of patients presenting at sex therapy clinics having this disorder (Anastasiadis et al., 2002).

Rationale for CBT Treatment

Because the combination of physical therapy to address physical aspects and CBT to address psychological aspects has been effective in other pain disorders, it is likely to be beneficial in the treatment of dyspareunia (Bergeron & Lord, 2003). Furthermore, McCabe (2001) commented that, according to the literature, cognitive strategies to reduce anxiety are an important ingredient for treatment.

This leads to the following questions:

- Q1: How effective is CBT in treating female sexual pain disorder?
- Q2: Is CBT equally effective as more invasive treatments such as vestibulectomy?
- Q3: Are some modalities of CBT more effective than others?

Method

Studies that addressed the utilization of CBT in treating female sexual pain disorders were identified through a literature search. Two electronic databases, MEDLINE and PsychINFO, were used. Search terms used were the following: *dyspareunia*, *vaginismus*, *vulvodinia*, *vulvar vestibulitis*, or *female sexual pain*; and *CBT*, *cognitive therapy*, or *cognitive behavioral therapy*.

Criteria for inclusion were studies that were (a) quantitative in nature, (b) published in a peer-reviewed journal, and (c) published within the past 10 years. The review produced eight studies, utilizing various CBT treatment types and modalities.

Results

Backman et al. (2008) studied 24 women with provoked vestibulodynia who were treated with a combination of physical and psychological therapy. Physical therapy included a form of systematic desensitization where patients gradually touched their genital area very gently at first and then gradually worked their way through the hierarchy established by the midwife. The patients were also educated about their genital functioning. Psychological counseling was primarily based on a cognitive model that increased the patient's awareness of the connection between the patient's thoughts and coital pain. It included increasing coping skills and self-esteem, evaluating and discussing views on sexuality, reducing negative thoughts about the patient's genitalia and vestibulodynia, and information about the impact of vestibulodynia on sexual function. At follow up, 79% of the participants considered themselves cured. (see Table 1).

It is difficult to evaluate the effectiveness of CBT from this study. Although the outcome looks promising, because physical interventions were done simultaneously and because the psychosexual counseling included types other than CBT, it is impossible to parcel out the benefits solely due to CBT. Furthermore, there are other problems with this study that make it difficult to draw useful conclusions about CBT: The number of participants was low; they did not use a validated instrument; the cognitive therapy was not standardized, nor was it described in detail sufficient for replication; the study was not randomized; and there was no control group, so we do not know if the participants would have gotten better on their own. Finally, it is impossible to determine how well the sample represents women with provoked vestibulodynia because the study did not specify the referral source.

Bergeron et al. (2001) studied 78 women with dyspareunia resulting from vulvar vestibulitis. Participants were randomized to one of three treatment types: vestibulectomy, surface electromyographic biofeedback, and group CBT (GCBT). Vestibulectomy is a minor day surgery performed under general anesthesia that involves removing a 2 mm × 1 cm section of the vulvar. Biofeedback training involved inserting a sensor into the vagina and practicing contracting exercises. GCBT treatment techniques included psychoeducation, progressive muscle relaxation, distraction techniques, Kegel exercises, vaginal dilation, rehearsal of self-coping statements, communication skills training, and cognitive

Table 1. *Study Outcome*

Study	Design	<i>n</i>	Initial Outcome ^a	Follow-Up Length	Follow-Up Outcome
Backman, Widenbrant, Bohm-Starke, & Dahlöf (2008)	Individual psychosexual therapy combined with physical therapy	24	Three fourths found it effective	No follow up	NA
Bergeron et al. (2001)	Randomized to vestibulectomy, biofeedback, or GCBT	78	All methods effective, but vestibulectomy more effective	Six months and 2.5 years	Same
Brown, Wan, Bachmann, & Rosen (2009)	Randomized to one of two medication groups or self-management CBT group	43	Results not statistically insignificant (power issue), but participants found all methods somewhat effective, with the CBT group slightly more effective	No follow up	NA
Kabakçi & Batur (2003)	Individual CBT treatment with physical therapy	16	All participants had improved sexual function	Four weeks	Same
Masheb, Kerns, Lozano, Minkin, & Richman (2009)	Individual CBT or SPT	50	Approximately one half found it effective	One year	Same or better
Ter Kuile et al. (2007)	GCBT, bibliotherapy CBT, or waitlist	117	Approximately one third achieved intercourse	Three months and 12 months	Same
Van Lankveld, Everaerd, & Grotjohann (2001)	Bibliotherapy CBT or waitlist	199	Approximately one half found it effective for vaginismus but not dyspareunia	Ten weeks	Not effective
Van Lankveld et al. (2006)	GCBT, bibliotherapy CBT, or waitlist	117	GCBT: 9% achieved intercourse Bibliotherapy CBT: 18%	Twelve months	GCBT: 21% Bibliotherapy CBT: 15%

Note. GCBT = group cognitive-behavioral therapy; CBT = cognitive-behavioral therapy; SPT = supportive psychotherapy.
^aReported in same terms as study.

restructuring. Results were measured with a mixture of clinicians' ratings, standardized instruments, and self-reports.

Although Bergeron et al. (2001) found significant effects for all three treatment types, on most of the measures vestibulectomy had more significant treatment effects than either GCBT or biofeedback, with similar results at six-month follow up (see Table 1). However, with regard to sexual and psychological adjustment there was equal improvement with all three treatment types. With the exception of perceived pain during intercourse, similar results were still found 2.5 years later ($N=51$; Bergeron, Khalifé, Glazer, & Binik, 2008).

Bergeron et al. (2001) found that vestibulectomy is the treatment type of choice for vulvar vestibulitis. However, these results may have been somewhat biased. According to Bergeron et al. (2001), there were more participants ($n=7$) in the vestibulectomy treatment type category that refused the treatment, as compared to the biofeedback ($n=1$) and CBT ($n=1$) groups, thus biasing the sample toward women with a favorable view of vestibulectomy. In addition, the high dropout rate may be indicative of the public's reluctance to undergo an invasive procedure like a vestibulectomy. This is in contrast to the fact that no participants dropped out of the CBT group. Furthermore, two of the 22 surgery participants

reported being worse after the surgery. Therefore, not only is the vestibulectomy group biased, it appears to be a less desirable form of treatment that may actually worsen the condition. Furthermore, a follow-up study did not find vestibulectomy to be superior when measuring perceived pain during intercourse (Bergeron et al., 2008).

Bergeron et al. (2001) did find lasting benefits to both GCBT and biofeedback. However, although this study was randomized and compared different treatment types, there are three main flaws to this study that inhibit the ability to draw useful conclusions about CBT. One flaw is that the only CBT modality included was group. The second shortcoming is that the CBT group utilized treatment types other than purely CBT, such as vaginal dilation and Kegel exercises. The third flaw is that there was no control group. Thus, not only is it impossible to determine the effectiveness of using pure CBT treatment techniques in a group modality, we cannot compare the effectiveness of group versus individual modalities, and we do not know if the participants would have improved on their own.

Brown, Wan, Bachmann, and Rosen (2009) performed a randomized study involving 43 women with vulvodynia. Participants were assigned to one of two medication groups—amitriptyline or amitriptyline with tramcinolone—or a self-management CBT group. The

CBT group intervention included sexual education, CBT, physical therapy, and sex therapy.

Brown et al. (2009) found significant reductions of pain in the CBT group in one half of the pain categories, as compared with one category for the amitriptyline group, and no categories for the amitriptyline with triamcinolone group. However, due to a statistical power issue, no significant efficacy differences were found between the groups (see Table 1).

Similar to the previous study (Bergeron et al., 2001), this study (Brown et al., 2009) was randomized but did not evaluate the utilization of pure CBT treatment types, the effectiveness of individual therapy, nor did it have a control group. Furthermore, a conclusion about medication can be drawn in a similar way as the conclusion about vestibulectomy in the Bergeron et al. (2001) study: There may be a public reluctance to take medication because it may be perceived as more invasive. In fact, a few participants ($n=8$) experienced adverse side effects. There was no follow up done for this study, so lasting effects cannot be evaluated.

Kabakçi and Batur (2003) studied 16 Turkish couples who were treated for vaginismus at a hospital. Couples were treated with CBT in individual 50-min sessions. Interventions included sexual education, sensate focus, and gradual desensitization with cognitive reframing. All participants had successful vaginal intercourse post-treatment and improved sexual functioning, even at four-week follow up (see Table 1). Like the Masheb, Kerns, Lozano, Minkin, and Richman (2009) study, the limitations were a small number of participants and the lack of a control group. In addition, the sample was solely drawn from the Turkish population, whose cultural values, such as the importance of a bride's virginity, could have influenced the outcome. This study (Kabakçi & Batur, 2003) also had a short follow-up period, making it impossible to evaluate the long-term duration of the effects.

Masheb et al. (2009) studied 50 women with vulvodynia. Participants were randomized to either individual CBT or individual supportive psychotherapy (SPT). Individual CBT types included motivational enhancement, role-playing, problem solving, and contingent reinforcement. The SPT treatment type was chosen to contrast the CBT treatment type because it is non-directive in nature and it lacks behavioral interventions, problem solving, goal-setting, and cognition changes. This study found both treatment types almost equally effective on all measures, with almost one half of the participants receiving a clinically meaningful reduction in pain (see Table 1). CBT was found to be slightly more effective when comparing clinician's cotton-swab ratings and overall sexual functions. These benefits were maintained, and some continued to improve at the one-year follow up.

For the most part, the Masheb et al. (2009) study was robust and well-designed. The study was randomized,

provided purely CBT interventions, and described them in sufficient detail to reproduce in a clinical environment. However, the participants were students of a school of medicine, and there was no control group. These weaknesses present two main issues: (a) we are less confident that these results will generalize to the clinical population, and (b) we do not know if these women would have improved on their own.

In examining the Masheb et al. (2009) study, Reese (2009) reported that a waitlist or placebo group would help researchers ferret out whether clients were benefited either by talking about their problem or being supported by someone educated in vulvodynia (p. 8). Another limitation of this study (Masheb et al., 2009) is the confounding relationship between depression and greater pain severity. Thus, it is unknown if participants reduced their pain by reducing their depression or by specifically treating their vulvodynia.

Ter Kuile et al. (2007) carried out a follow up to the van Lankveld et al. (2006) study to determine if there were any mediating factors. These researchers studied 117 women with life-long vaginismus to determine if using CBT to change fear of penetration and avoidance behavior would result in the ability to have full vaginal-penile penetration. Participants were randomly assigned to three-month group, bibliotherapy CBT treatment, or a waitlist. CBT treatment techniques included cognitive therapy and gradual exposure, including relaxation and sensate focus type of exercises.

Ter Kuile et al. (2007) found approximately one third of participants who received the CBT treatment (regardless of modality) achieved more full vaginal-penile penetration (see Table 1). CBT participants also had reduced fear of coitus and higher non-coital sexual behavior scores. Thus, these researchers concluded that reducing fear of coitus and changing avoidance behavior partly mediates the success of treating life-long vaginismus with CBT. Specifically, techniques such as gradual exposure may be helpful. The researchers did not find any pretreatment variables (age of participant or partner, duration of vaginismus complaint, fear of coitus, successful non-coital penetration behavior, treatment credibility, fear of nonsexual coital activity, female or male sexual dissatisfaction or avoidance, sexual desire or arousal, lubrication, orgasm, female sexual satisfaction, marital satisfaction, anxiety, or general life satisfaction) that significantly predicted outcome.

Van Lankveld, Everaerd, and Grotjohann (2001) conducted a randomized waitlist controlled trial to study the effects of CBT bibliotherapy on couples containing at least one partner with a sexual dysfunction. Participants were randomly assigned to either CBT bibliotherapy with minimal therapist support or a waitlist. Out of the female participants, 12% of the experimental group and 17% of the waitlist group had been diagnosed with vaginismus, and 8% of the experimental group and 18% of the waitlist group had been diagnosed

with dyspareunia. The remaining female participants either had no problem, Hypoactive Sexual Desire Disorder (APA, 2000), or anorgasmia. The experimental group utilized a manual containing psychoeducational information to increase sexual knowledge and correct faulty sexual attitudes, and behavioral interventions such as sensate focus.

At posttreatment for all sexual dysfunctions, with the exception of dyspareunia, almost one half of the CBT participants (male and female) indicated via self-report that their condition had improved versus less than one fifth of the waitlist participants (see Table 1). Although women receiving CBT showed improvement at post-treatment in all dysfunctions, with the exception of dyspareunia, these effects were not found at follow up. This study indicates that bibliotherapy treatment is initially beneficial, but the benefits may not last. Because the researchers just gave the participants the manual without following up on a regular basis, it is difficult to determine if treatment failure was due to poor execution or the treatment itself.

At both posttreatment and follow up, as compared with the waitlist group, participants with vaginismus improved, but participants with dyspareunia had increased vaginal discomfort. Thus, there is some indication that CBT bibliotherapy is contra-indicated for clients with dyspareunia. This result may be explained by possible organic causes of dyspareunia, underscoring the importance of requiring clients to have a clean physical exam before starting treatment. Another possible contraindicator is lack of compliance. Both male and female compliance was strongly connected to treatment effect. Because of this strong connection, CBT bibliotherapy may also be contra-indicated in couples with reluctant partners.

Van Lankveld et al. (2006) randomly assigned 117 women from the Netherlands with lifelong vaginismus to one of three groups: GCBT, CBT bibliotherapy, or waitlist. Both GCBT and CBT bibliotherapy consisted of sexual education, relaxation exercises, gradual exposure, cognitive therapy, and sensate focus exercises.

At posttreatment, more CBT participants achieved intercourse as compared with waitlist participants, with the bibliotherapy participants most likely to have had sexual intercourse. Specifically, 9% of group participants and 18% of bibliotherapy participants achieved intercourse. However, the group treatment effects increased with time, whereas the bibliotherapy effects diminished. Specifically, at the three-month follow up, 17% of group participants and 14% of bibliotherapy had achieved intercourse. At the 12-month follow up, group effects continued to grow, whereas bibliotherapy effects remained approximately the same: 21% and 15%, respectively (see Table 1).

Group participants had more successful non-intercourse penetration (79%) at posttreatment as compared with bibliotherapy, whose results did not

differ from the waitlist participants (36%). However, these effects decreased at the three-month follow up and again at the 12-month follow up, although they remained above baseline levels. No effects on subjective sexual functioning were found for either group. Participants reported improved sexual desire, sexual arousal, and sexual satisfaction. Significant improvement was found for sexual desire at the three- and 12-month follow ups; however, smaller improvements were noted for sexual arousal. Marital satisfaction, on the other hand, had significantly decreased and was actually lower at 12 months as compared with baseline. According to this study, the benefits of CBT treatment vary with both modality and sexual behavior, and CBT is detrimental to marital satisfaction.

Discussion

The results from these eight studies paint an unclear picture of CBT effectiveness. All studies (Backman et al., 2008; Bergeron et al., 2001; Brown et al., 2009; Kabakçi & Batur, 2003; Masheb et al., 2009; ter Kuile et al., 2007; van Lankveld et al., 2001; van Lankveld et al., 2006) indicated that CBT was initially effective in treating female sexual pain disorders (see Table 1), but was no more effective than biofeedback for dyspareunia (Bergeron et al., 2001) or medication for vulvodynia (Brown et al., 2009), and less effective than vestibulectomy for dyspareunia (Bergeron et al., 2001). However, because the latter two alternatives are more invasive than CBT, they may be less desirable.

Furthermore, the effects of CBT may not last. Two studies containing a control group (van Lankveld et al., 2001; van Lankveld et al., 2006) did not demonstrate lasting effects, although the rest of the studies did, including one with a control group (ter Kuile, 2007; see Table 1). Finally, there may be situations in which CBT may be harmful. Specifically, CBT bibliotherapy may be counter-indicated for dyspareunia or in couples with reluctant partners (van Lankveld et al., 2001), and may reduce marital satisfaction (van Lankveld et al., 2006).

Because none of the studies compared individual and group modalities, it is impossible to draw a conclusion about which is more effective. Studies utilizing an individual modality (Backman et al., 2008; Kabakçi & Batur, 2003; Masheb et al., 2009) had good results, with the Kabakçi and Batur (2003) study reporting a 100% cure rate ($N=16$), but so did the studies utilizing the group modality (Bergeron et al., 2001; Brown et al., 2009; ter Kuile et al., 2007; van Lankveld et al., 2006; see Table 1). It is also difficult to ascertain the effectiveness of pure CBT treatment types because all of the studies, except for one (Masheb et al., 2009), utilized a mixed model (see Table 2).

Generalization of results is somewhat difficult due to both a small number of participants (Backman et al.,

Table 2. *Study Details*

Study	Sufficient <i>n</i> ? ^a	Randomized?	Control Group?	Pure CBT? ^b	Validated Instruments?	Clinician's Report?	Representative Sample?
Backman, Widenbrant, Bohm-Starke, & Dahlöf (2008)	No	No	No	No	No	No	Cannot determine
Bergeron et al. (2001)	Yes	Yes	No	No and group only	Mixed	Yes	Yes
Brown, Wan, Bachmann, & Rosen (2009)	No (power issue)	Yes	No	No	Yes	No	No
Kabakçi & Batur (2003)	No	No	No	No	Yes	No	No
Masheb, Kerns, Lozano, Minkin, & Richman (2009)	Yes	Yes	No	Yes	Yes	Yes	No
Ter Kuile et al. (2007)	Yes	Yes	Yes	No	Yes	No	No
van Lankveld, Everaerd, & Grotjohann (2001)	Yes	Yes	Yes	No	Mixed	No	No
van Lankveld et al. (2006)	Yes	Yes	Yes	No	Yes	No	No

Note. CBT = cognitive-behavioral therapy.
^a*n* > 40? ^bWere CBT interventions the only techniques used?

2008: *N* = 24; Kabakçi & Batur, 2003: *N* = 16; see Tables 1 and 2) and participant characteristics. Kabakçi and Batur (2003) utilized all Turkish women, and both the van Lankveld et al. studies were done in the Netherlands (see van Lankveld et al., 2001; van Lankveld et al., 2006). There may be cultural differences in these populations that make it difficult to generalize the results.

There are some limitations to this literature review. Perhaps PsychINFO and MEDLINE were not the best databases to choose, and perhaps a keyword was missed that could have yielded more information. In addition, because the author is biased toward the effectiveness and efficacy of CBT, some of the conclusions may be slanted in favor of CBT. Finally, by limiting the search to journal articles on quantitative studies published in the past 10 years, perhaps information was overlooked that could have been helpful or given more insight into the problem, prompting more discussion and thought.

Conclusions and Implications

Although CBT appears to be a promising treatment type for female sexual pain disorders, more research needs to be done. Results obtained from the ter Kuile et al. (2007) study could be expanded to explore the roles that fear reduction and increases in sexual behavior play in reducing pain. In addition, more randomized longitudinal studies need to be performed to determine if the initial effectiveness of CBT will last. Also, studies

that compare individual to group modality also need to be conducted to address this gap in the literature. Finally, there is evidence that relationship factors need to be incorporated into the research base.

Only three (Backman et al., 2008; Kabakçi & Batur, 2003; Masheb et al., 2009) out of eight studies included individual treatment. This lack of focus on an individual modality is surprising considering both the extremely personal and sensitive nature of the presenting problem and the interpersonal factors that are involved.

Most women seek treatment for female sexual pain disorders because they cannot have sexual intercourse with their partners or they do not want to be touched in a sexual way due to fear of the pain. It follows that the resulting avoidance of sexual activity might seriously impact their relationships. Furthermore, problematic patterns of behavior, thought, and feeling may be created around the experience of painful intercourse. Therefore, it is likely that these patterns, as well as the general impact of the sexual dysfunction, would need to be addressed in order to assist the couple in returning to a higher level of sexual function. Yet, none of the studies addressed the relationship component. In fact, one study (van Lankveld et al., 2006) showed that using individualized CBT treatment, whether in a group or individual modality, can be detrimental to marital satisfaction. Perhaps this would not have been the case if relationship counseling had been included in the treatment.

According to Reese (2009), a major component missing in the treatment of vulvodynia is couples

therapy. If the relationship factors were better understood, we might be able to identify which factors are helpful and, thus, improve interventions. For example, perhaps a more effective way of treating vulvodynia is to introduce and encourage alternate ways of being intimate. The focus would be removed from intercourse by including sensate-focus type exercises to help patients expand their conceptualization of sexual activity. At the same time, residual dysfunctional thoughts would be modified to encourage this new sexual behavior. It is interesting to note that participants in the Kabakçi and Batur (2003) study, who were treated individually, yet had their dysfunction framed as a “relationship issue,” had improved marital satisfaction posttreatment.

In summary, about three fourths of women had improved sexual functioning and reduced pain after receiving CBT treatment, with about one fifth able to achieve intercourse. Bibliotherapy appeared to be initially more effective, but group and individual CBT were more effective in the long term. Although other treatment types, such as surgery and medication, were found to be more effective, CBT may be preferable due to its noninvasive nature.

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