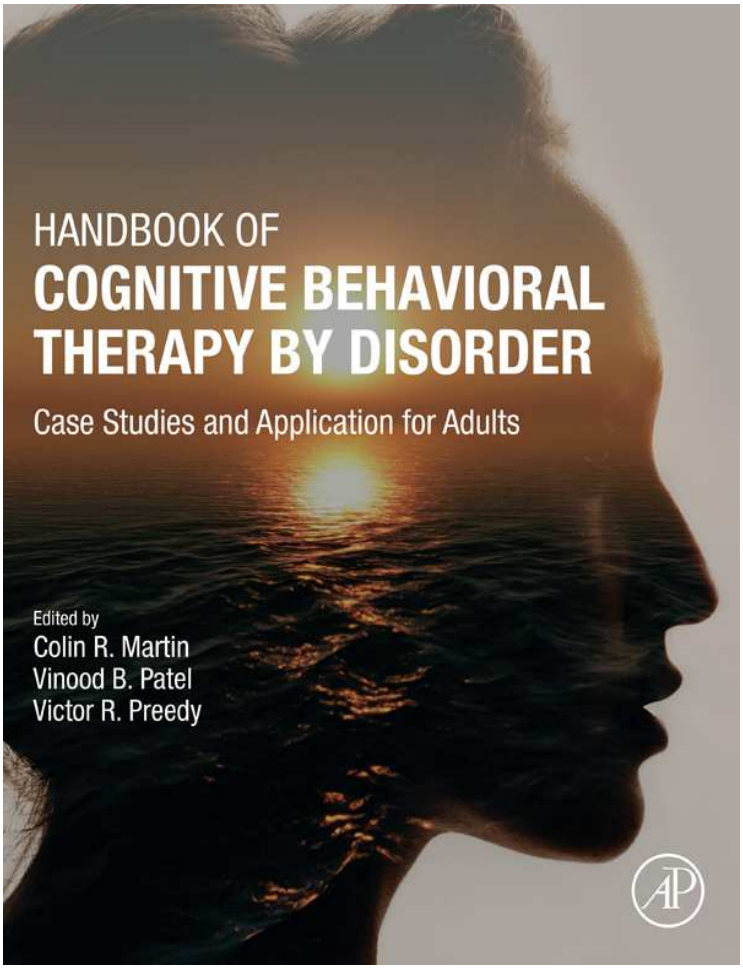

Françoise Adam and Elise Grimm, Female sexual dysfunction: Applications of cognitive-behavioral therapy. In: Colin R. Martin, Vinood B. Patel and Victor R. Preedy (eds.) Handbook of Cognitive Behavioral Therapy by Disorder. Burlington: Academic Press, 2023. pp. 147-161.
ISBN: 978-0-323-85726-0

Chapter 13

Female sexual dysfunction: Applications of cognitive-behavioral therapy

Françoise Adam and Elise Grimm

Psychological Sciences Research Institute, Faculty of Psychological and Educational Sciences, UCLouvain, Ottignies-Louvain-la-Neuve, Belgium

Abbreviations

APA	American Psychiatric Association
CBT	cognitive-behavioral therapy
DSM-5	diagnostic and statistical manual—fifth edition
DSM-IV-TR	diagnostic and statistical manual—fourth edition—revised
FDA	Food and Drug Administration
FOD	female orgasmic disorder
FSD	female sexual disorder
FSDS-R	Female Sexual Distress Scale–revised
FSFI	female sexual function index
FSIAD	female sexual interest/arousal disorder
MSD	male sexual disorder

Introduction

The World Health Organization (2021) defines sexual health as "an integral part of overall health, well-being, and quality of life," which changes over the lifespan following exposure to specific life events (e.g., medical interventions, menopause, reproductive experiences, or relationships) and should be assessed in routine medical and psychological examinations in women. According to a study by Bachmann (2006), 60% of professionals were aware that one- to three-quarters of their patients suffered from female sexual disorders (FSDs). Despite this, most were reluctant to openly discuss their patients' sexual functioning or to perform a full assessment.

Patients are also reluctant to discuss their sexual difficulties to avoid generating a certain discomfort in their practitioners. Less than 25% of sexually active men and women suffering from sexual difficulties actually consult for these (Laumann, Glasser, Neves, & Moreira, 2009). Patients with sexual difficulties are often hesitant to consult and will not be sufficiently informed as to which professional to turn to. Consequently, sexual topics remain taboo for the majority of patients and practitioners.

However, approximately 43% to 44% of women suffer from FSDs (Laumann, Paik, & Rosen, 1999; Shifren, Monz, Russo, Segreti, & Johannes, 2008). FSDs refer to the difficulty in one or more phases of the sexual response, which includes desire, arousal, lubrication, and orgasm. One should note that 12% of women with FSDs also experience emotional distress and negative emotions such as guilt, frustration, stress, anger, and embarrassment with respect to their sex life (Shifren et al., 2008). FSDs negatively affect women's sexual and marital satisfaction, as well as quality of life (Nappi et al., 2016). Despite diagnosis being the first step for women to access appropriate treatment, FSDs remain often unidentified. In light of the current limitations discussed, the goal of this chapter is to provide clinicians and practitioners with a better understanding of assessment and empirically validated treatments for FSDs.

Handbook of Cognitive Behavioral Therapy by Disorder. https://doi.org/10.1016/B978-0-323-85726-0.00036-3

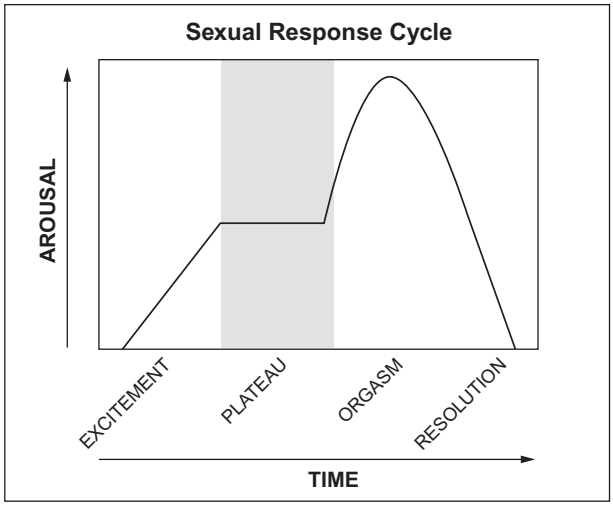

FIG. 1 The human sexual response. This figure shows the human sexual response. *(From Masters, W. H., & Johnson, V. E. (1966).* Human sexual response. *Little, Brown and Company: Boston with permission.)*

The female sexual response

The first sexual response model was linear and based on the physiological reactions observed during coitus (Masters & Johnson, 1966). Fig. 1 shows the four successive phases originally identified as arousal, plateau, orgasm, and resolution. The authors observed that the two physiological reactions of women's sexual response of women are vasocongestion of the genitals and increased neuromuscular tension in the entire body. Kaplan (1979) later completed this model by adding the phase of desire, essential for the increase of sexual excitation in women.

The circular model (Basson, 2005; Basson, Wierman, Van Lankveld, & Brotto, 2010) proposes a more complex expression of the female sexual response, incorporating emotional and relationship elements, such as the emotional intimacy context (i.e., relationship with partner, person's state of mind). This model emphasizes that spontaneous desire (i.e., sexual drive) is not always the driving force behind women's engagement in sexual activities. Desire can also be triggered by a context of emotional intimacy, which precedes physical arousal and includes the desire to be close or to experience sexual pleasure.

According to Basson and colleagues (e.g., Basson et al., 2000, 2010), female arousal is the culmination of both genital (i.e., biological) and subjective (i.e., psychological) arousal. Sexual stimuli will enable the reaching of a certain degree of sexual excitement, which the woman can perceive both psychologically (subjective excitement) and physiologically (genital excitement). If the woman evaluates this increase in sexual arousal as pleasurable, erotic and/or sexual, this will reinforce both types of arousal and the desire to pursue the sexual activity. If the woman evaluates the rise in sexual arousal in an unpleasant manner (e.g., with anxiety or guilt), this may inhibit the female sexual response. Finally, both physical and emotional satisfaction, observed through orgasm attainment, are important for developing emotional intimacy between partners and for increasing the desire to engage in future sexual activity (Basson et al., 2010). This model provides a better understanding of the interplay between emotional, interpersonal, and physical factors of the female sexual response. Several authors (e.g., Nowosielski, Wróbel, & Kowalczyk, 2016), however, claim that no single model truly captures the complexity of the female sexual experience. Clinicians are therefore advised to thoroughly assess each patient's own experience.

Sexual dysfunction model

In striving to reach an understanding of the precipitating and maintaining factors of sexual dysfunctions, a recent systematic review by Tavares, Moura, and Nobre (2020) exposed the important role of cognitive processing factors. Negative thoughts related to sexual performance or a negative body image can severely interfere with women's sexual arousal (Dove & Wiederman, 2000). Individuals with sexual dysfunction are more likely to activate negative sexual cognitive schemas, which in turn are fueled by dysfunctional sexual beliefs (Nobre, Gouveia, & Gomes, 2003; Nobre & Pinto-Gouveia, 2006, 2008). This can generate negative automatic thoughts and unpleasant emotions, including anxiety, sadness, guilt,

and anger. These will prevent the person from focusing upon the erotic and sexual stimuli and thereby hinder the sexual response (Nobre & Pinto-Gouveia, 2006). Otherwise known as cognitive distraction, this process is one of the dysfunctional processes most often encountered by men and women with sexual dysfunctions (Brotto et al., 2016), as it decreases both subjective and physiological arousal (Dove & Wiederman, 2000).

Barlow's model of cognitive interference (1986) provides a better understanding of cognitive distraction. The latter explains that "negative affective responses may contribute to the avoidance of erotic cues and thus facilitate a kind of cognitive interference produced by focusing on non-erotic cues" (p. 144). People with sexual dysfunctions tend to focus on performance-related concerns and nonerotic stimuli during sexual activities. This reduces sexual arousal and increases performance anxiety. In contrast, women without sexual dysfunctions are more likely to focus their attention upon erotic and sexual stimuli, thereby increasing sexual arousal. For example, when a woman experiences a decrease in sexual desire during sexual activities, she may experience this as a failure and consequently develop anxious apprehension about sexual activities.

Wiegel, Scepkowski, and Barlow (2007) adapted Barlow's (1986) model to focus upon the dysfunctional cognitive and emotional processes that result from anxious apprehensions. They identified four principal consequences, namely (1) a sense of loss of control over the sexual situation, accompanied by unpleasant thoughts and emotions; (2) hypervigilance toward signs of sexual arousal that are judged unsatisfactory; (3) a shift in self-focused attention (i.e., self-evaluative focus) with a focus toward the perception of one's inability to cope with the situation; and (4) significant physiological activation (i.e., arousal). As a result, anxious apprehensions regarding sexual activities and the avoidance of unpleasant sexual situations increase and maintain FSDs. Evidence suggests that such cognitive processing factors should be systematically taken into account in the assessment and the treatment during psychological interventions (Tavares et al., 2020). These processes form a vicious circle displayed in Fig. 2, the latter of which can be presented to the patient during assessment.

Practice and procedures

Diagnosing female sexual dysfunctions

According to the American Psychiatric Association's (APA) Diagnostic and Statistical Manual Fifth Edition (DSM-5, 2013), sexual dysfunctions are defined as "a clinically significant disturbance in a person's ability to respond sexually

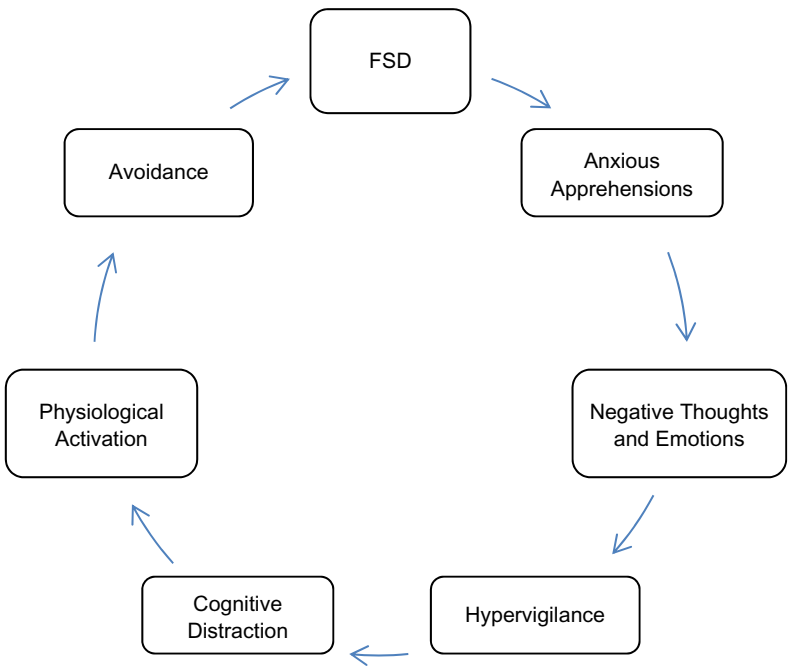

FIG. 2 Vicious circle implicated in female sexual dysfunctions. This figure represents the mechanisms involved in the appearance and maintenance of FSDs. *(The figure is adapted from Wiegel, M., Scepkowski, L. A., & Barlow, D. H. (2007). Cognitive-affective processes in sexual arousal and sexual dysfunction. In* Kinsey Institute Conference, 1st, Jul, 2003, Bloomington, IN, US; This Work Was Presented at the Aforementioned Conference, *cognitive-emotional model of sexual dysfunctions with permission.)*

TABLE 1 DSM-5 diagnostic criteria for female sexual dysfunctions and specifiers.

Female sexual dysfunctions	Diagnostic criteria
Female sexual interest/arousal disorder	*At least three of the six following symptoms*: Absence of or reduction in (a) interest in sexual activity; (b) sexual thoughts or fantasies; (c) sexual activity initiation; (d) sexual excitement or pleasure during sexual activities in (almost) all sexual encounters; (e) sexual interest/arousal following internal or external sexual or erotic cues; and/or (f) genital or nongenital sensations during sexual activity during sexual activities in (almost) all sexual encounters
Female orgasmic disorder	*Presence of one or two symptoms*: (a) marked delay in –, infrequency of –, or absence of orgasm and (b) markedly reduced intensity of orgasmic sensations almost all or all the time during sexual activity
Genito-pelvic pain/penetration disorder	*Presence of "persistent or recurrent difficulties" with respect to at least one of four symptoms*: (a) vaginal penetration during intercourse; (b) vulvovaginal or pelvic pain during vaginal intercourse or attempted penetration; (c) important fear regarding vulvovaginal/pelvic pain either in anticipation of—or resulting from—vaginal penetration; or (d) tension or tightening of the pelvic floor muscles during (attempted) vaginal penetration
Substance/medication-induced sexual dysfunction	Sexual dysfunctions resulting from (a) substance intoxication or medication withdrawal, and (b) involving medication or substance known to produce such disturbances in sexual functioning. The disturbance must not be exclusively present during delirium, and clinicians must specify with a mild, moderate, severe or without a substance use disorder. The diagnosis also requires the specification with respect to the temporal relationship between medication or substance intake and subsequent sexual dysfunction, namely (1) during intoxication, (2) during withdrawal, or (3) after medication use
Other specified/unspecified sexual dysfunction	Presence of several sexual-related symptoms causing clinical and significant distress, though the symptoms do not meet all diagnostic criteria for a specific disorder class. In the former category, the clinician chooses to reveal the reason for which a diagnostic cannot be established, while they will point to insufficient information in the latter
Specifiers	
Lifelong	Present since the first sexual experiences
Acquired	Developed following a period of normal sexual functioning
Situational	Specific to particular partners, stimulations, or situations
Generalized	Generalized to a number of situations
Severity	Mild, moderate, or severe distress linked to the symptoms

Table containing all DSM-5 diagnostic criteria and specifiers required to be taken into consideration when evaluating female sexual dysfunctions.

or to experience sexual pleasure" (APA, 2013). Since the new DSM-5, sexual diagnoses are sex-specific. FSD diagnoses require one to establish whether the disorder is lifelong, acquired, situational, or generalized (see Table 1 for an overview of criteria). The symptoms must be present since 6 months, cause significant clinical distress, and are not better attributable to another reason (i.e., mental disorder such as depression or anxiety, relationship distress or violence, other significant stressors, or the effects of a substance, medication or medical condition). A final specifier includes the current severity (Table 1). Additionally, the DSM-5 recommends adequate clinical judgment to separate dysfunction from the absence of adequate sexual stimulation. The next chapter section will focus upon the most prevalent diagnoses, namely Female Sexual Interest/Arousal Disorder, Female Orgasmic Disorder, and Genito-Pelvic Pain/Penetration Disorder.

Female sexual interest/arousal disorder (FSIAD)

Diagnosis

FSIAD is characterized by the interpersonal context in which it is rooted. The woman experiences a "desire discrepancy" with respect to their partner (APA, 2013), which manifests itself through at least three of the six symptoms presented in Table 1. It is important to note that if a lifelong absence of sexual interest or arousal is better explained by one's identification as "asexual," the current diagnosis cannot be made. This most recent criteria has considerably changed in two ways since APA's Fourth Edition of the DSM (DSM-IV-TR, APA, 2000; for a full description of changes between diagnoses,

see Clayton & Juarez, 2019). First, sexual desire no longer represents a prerequisite for a healthy sexual response. It is well accepted that desire may result from and/or accompany a healthy arousal response following sexual stimuli. Second, the DSM-5 also considers arousal as a subjective experience in addition to the physical phenomenon previously described. The desire and arousal disorders previously observed in the DSM-IV-TR have thus merged under one category. With the new diagnosis requiring further validation, it is not uncommon for women to show different symptom profiles.

Prevalence and etiology

The lack of desire and/or arousal is the most frequent sexual-related complaints (Shifren et al., 2008). Statistics indicate low sexual interest in 22% of U.S. women (Laumann et al., 1999), and that 21%–31% of active women report low desire (McCormick, Lewis, Somley, & Kahan, 2007). The lack of frequent sexual activity, difficulties experiencing orgasm, pain during sexual activity, unrealistic expectations regarding the appropriate level of sexual interest/arousal, poor sexual techniques, and reduced sexual knowledge represent additional, important variables to identify and acknowledge during diagnosis (Parish et al., 2016). In addition, changes in hormones (e.g., estradiol, androgen), neurotransmitters (e.g. dopamine), and medical disorders (e.g., diabetes, cancer, depression) have been cited as prominent risk factors for the disorder (Parish et al., 2016). Regarding the psychological factors, daily stressor occurrence or more general current life situation may also negatively impact arousal and/or desire (Meston & Stanton, 2017). On a relationship level, a woman's feelings for her partner represent an important predictor of sexual desire, even when accounting for hormonal levels (e.g., Guthrie, Dennerstein, Taffe, Lehert, & Burger, 2004). With respect to societal factors, variables such as religion and culture may hinder arousal and/or desire due to the guilt and shame they both generate in relation to sexual experiences (Meston & Stanton, 2017).

Female orgasmic disorder (FOD)

Diagnosis

The criteria for FOD requires the self-reported presence of one or two symptoms linked to the experience and intensity of orgasm (see Table 1). It is additionally necessary to specify whether the female patient has never experienced an orgasm in any other situation before. Oftentimes, the diagnosis is accompanied by difficulties in sexual interest and/or arousal and can be guided by the observation of physiological changes (APA, 2013).

Prevalence and etiology

According to the DSM-5, around 10%–42% of women will report a diagnosis of FOD. Wincze and Weisberg (2015) estimate the prevalence rate as much higher, given the DSM-5 fails to account for women who are unable to experience orgasm, yet are not distressed by it. Akin to all female sexual dysfunctions, the etiology of FOD is multifold (for a review, see Parish et al., 2016). First, the lack of sexual excitatory activation from the central neuroendocrine or peripheral nervous systems (i.e., dopamine, oxytocin, melanocortin, and norepinephrine), and/or the increased sexual excitatory activation from central neuroendocrine sexual inhibitory processes (i.e., opioids, serotonin) may hinder orgasm attainment. Second, FOD may result from low hormone levels, medical disorders, or complications from medical procedures. Third, psychological factors such as negative emotions (e.g., guilt, shame, emotional distress), negative schemas and dysfunctional sex-related beliefs, mood disorders, excessive fatigue, or overthinking during sex are also known to be associated with orgasmic disorder (Adam, Day, De Sutter, & Brasseur, 2017; Parish et al., 2016). As result of sex-related ruminations, women may also engage in cognitive distraction, which, consequently, may inhibit them from staying focused upon sexual and erotic stimuli during sexual activities and further hinder orgasm (for a review, see Adam et al., 2017). Fourth, psychosocial problems may also cause orgasmic disorder, including communication problems within the couple, traumatic past couple experience or sexual abuse, or cultural and religious restrictions. The presence of sexual dysfunctions in the partner may also inhibit oneself from reaching orgasm.

Genito-pelvic pain/penetration disorder

Diagnosis

The diagnosis for genito-pelvic pain/penetration disorder requires the patient to experience "persistent or recurrent difficulties" in at least one of the four symptoms presented in Table 1 (APA, 2013). A frequent observation associated with the disorder is the avoidance of not only sexual activities but also of gynecological examinations. In addition, it is common for women to report relationship difficulties or feelings of inadequate femininity. The previous, separate classifications of dyspareunia and vaginismus found in the DSM-IV-TR (APA, 2000) have been combined to form the current diagnostic.

Dyspareunia (pain during intercourse) is a "recurrent acute pain located between the vaginal introitus to the uterus and adnexae" (Bergeron et al., 2001). Vaginismus is characterized by marked tension or tightness of the pelvic floor musculature during attempts at vaginal penetration (APA, 2013).

Prevalence and etiology

Studies report that 14%–34% of younger women and 45% of older women are affected by penetration disorder, respectively (Van Lankveld et al., 2010). At the biological level, it is well understood that the majority of sexual pain difficulties linked to the genital skin or mucus membranes result from inflammation caused by acute general infections (Bergeron, Corsini-Munt, Aerts, Rancourt, & Rosen, 2015). In contrast, the risk factors underlying vulvodynia are not clear. Pain may be the result of multiple physiological changes including malignant vulva lesions, transient conditions (e.g., infections such as herpes), dermatological disease-related lesions in tissues, hypersensitivity in the tissues around and within the vestibule, and age- or event-related hormonal changes (for reviews, see Bergeron et al., 2015; Conforti, 2017; Dias-Amaral & Marques-Pinto, 2018). Psychological responses such as cognitive catastrophizing, fear, and hypervigilance to pain, subsequently leads to avoidance of sexual interactions and contribute to the maintenance of the disorder (Conforti, 2017). Low self-efficacy and cognitive schemas (e.g., incompetence, rejection) also contribute, as women will stay focused on negative interpretations of their sexual events (Dias-Amaral & Marques-Pinto, 2018). Significantly stressful events and emotional disorders, such as depression and anxiety, are also thought to sustain muscle contractions. Finally, relationship-related factors, with a focus on both the woman's communication about her chronic pain and the partner's response, may also play an important role (Conforti, 2017).

Assessing female sexual dysfunctions

Setting and format

According to the American College of Obstetricians and Gynecologists (2017), sexuality should be approached through open dialogues and open-ended questions using gender-neutral terminology. Questions should be progressive, ranging from less to more intimate, as such to avoid sudden patient discomfort. The PLISSIT model (Annon, 1976) recommends several steps for FSD assessment: (1) asking the patient's permission (*P*) to address the area of sexuality; (2) providing limited information (*LI*) about sexual functioning; (3) offering specific suggestions (*SS*) for improving sexual functioning, and (4) initiating intensive therapy (*IT*).

Assessment lasts about 3–5 sessions depending on whether the patient is consulting alone or as a couple. Half of the time, patients will attend the consultations with their partner. According to Brotto et al. (2016), there is an interdependent link between both partner's sexual functioning. If one partner presents a sexual dysfunction, the emergence of sexual dysfunctions and decreased sexual satisfaction in the other is frequent (up to a three-fold probability: Chew et al., 2020). Should the patient consults alone, their partner should be invited to at least one session for evaluation. Based on the case conceptualization, the clinician may suggest individual, couple, or mixed formats (e.g., individual sessions with one partner and occasional consultations as a couple). The choice of therapy format is highly dependent upon the sexual dysfunction type, its presence in one or both partners, and the patients' objectives.

Assessment goals

The first assessment goal is to evaluate the presence of sexual dysfunctions according to the DSM-V and biopsychosocial model (Brotto et al., 2016). The second assessment goal is to exclude any biological causes behind the patient's sexual difficulties. An interdisciplinary approach (e.g., between gynecologist, physical therapist, psychologist) is therefore essential (Chew et al., 2020). The third goal is to determine the patients' expectations for therapy. Remission is often the main priority. However, therapy may also improve other aspects of the marital and sexual relationship, such as communication and relationship satisfaction, without necessary resolving the sexual difficulties. Furthermore, the absence of sexual dysfunctions does not guarantee that patients are sexually satisfied (Brotto et al., 2016). Some patients report sexual distress without meeting the diagnostic criteria for FSD, and they may therefore still benefit from sex therapy. Finally, the fourth goal is to provide information on sexual functioning, not only to reassure patients, but also to formulate explanatory hypotheses for the difficulties encountered. Psychoeducation promotes a better understanding of the predisposing, precipitating, and maintaining factors of sexual difficulties.

TABLE 2 Biopsychosocial factors required for female sexual dysfunction assessment.

Biological factors Medical and surgical conditions: lower urinary tract problems, endometriosis, uterine fibroids, breast and ovarian cancer, spinal cord injury, hormonal changes, and medications (e.g., antidepressants and antianxiety)
Sociocultural factors Age, education, ethnicity, income
Lifestyle factors Unhealthy diet, lack of exercise, smoking, alcohol and drug abuse
Life stressors Infertility, postpartum period, aging and menopause
Interpersonal and relational factors Intimacy, lower relationship satisfaction, partner sexual function, poor sexual communication, partner illness, partner discrepancies in level of sexual desire between partner, negative partner response, partner violence
Psychological factors *Developmental factors* Problematic attachment, childhood abuse or neglect, history of sexual abuse and trauma, early sexual experiences (e.g., masturbation), personality traits (e.g., neuroticism, introversion and low positive traits affects), negative cognitive schema, sexual beliefs (e.g., sexual myths, body image beliefs) *Psychological processing factors* Causal attribution to sexual problems, performance anxiety, efficacy expectations, cognitive distraction, content of negative thoughts during sexual activity, and negative emotions during sexual activity (e.g., Anxiety and low mood, and anxious apprehension of sexual activity) *Comorbid mental health issues* Stress, depression, physical illness (e.g., multiple sclerosis, diabetes, breast cancer survivors), anxiety disorders (e.g., social phobia, panic disorder), posttraumatic stress disorder, substance use disorder, and medication
The table shows the main factors which must be accounted for during assessment, primarily based on Brotto et al. (2016) and Khajehei et al. (2015).

Assessment interview

The first assessment sessions presented in the current chapter are based upon a biopsychosocial approach and Brotto and colleagues' (2016) systematic review, with questions evaluating biological, psychological, interpersonal, and sociocultural factors, as well as life events and stressors. The clinician must question lifestyle choices such as an unhealthy diet, a lack of exercise, smoking, and alcohol and drug abuse, in addition to other factors that may influence sexual functioning, namely negative body image, negative attitude toward sex, types of sexual practices (Khajehei, Doherty, & Tilley, 2015), sexual self-esteem, and sexual satisfaction (Brotto et al., 2016). Table 2 provides an exhaustive overview of the different factors to consider for a biopsychosocial assessment of FSD. Sexual dysfunctions are assessed both diachronically (i.e., understanding the onset and evolution of the difficulties) and synchronically (i.e., evaluating the interacting effects of cognitive, emotional, behavioral, and environmental dimensions of the sexual difficulties). FSDs should be consistently evaluated at the beginning, middle, and end of therapy to evaluate treatment efficacy.

First session

The American College of Obstetricians and Gynecologists (2017) recommends for clinicians to gather information concerning physical health and sexual history, after which a DSM-5 diagnosis (APA, 2013) may be proposed. Beginning with medical questions will help put patients at ease before addressing details that are more intimate. The clinician will then address interpersonal and relational factors, as well as life stressors. Finally, the clinician explores psychological factors. All assessment questions can be found in Table 3 and can be sequentially discussed with the client in the presented order.

Second and third session

The second session hones in on the maintaining psychological factors responsible for the patient's sexual difficulties (Table 3). The clinician should carry out the diachronic evaluation of the patient's affective and sexual history (e.g., education, sexual experiences, traumas, etc.), and sexual functioning. Should the patient be consulting with his or her partner, the clinician should hear each individual independently, oftentimes during the third session. Moreover, this individual

TABLE 3 Assessment interview questions.

Assessment session number	Important questions
1	**Biological, sociocultural, and lifestylefactors** • What is your date of birth? • Do you currently work? • Do you have any disorders, even if they are not directly linked to the current consultation? • Are you taking any medications? • Have you had any operations in the past? • Do you smoke? Do you drink alcohol? • Do you exercise? **Interpersonal and relational factors** and **life stressors** • Are you currently in a relationship? Are you married? Length of relationship? Cohabitation? • Do you have children? Do you have a desire to become pregnant? • How is the marital relationship with your partner outside of sex? • Are there any stressful events that you relate to your sexual difficulties? **Psychological factors** • Could I ask you some more intimate and sexual questions? • Could you explain to me how it is going at the intimate and sexual level? • When was the last time you had sex? How did it go? • Are you still having sex? How often? • How long have you been experiencing these sexual difficulties? In what situation(s)? What was it like before? • What motivated you to come for a consultation now? • What are your expectations from the consultation?
2	**Affective and sexual history** • At what age did you start your emotional and sexual life? • What was your first sexual experience like? • Have you ever used self-stimulation/masturbation? • What kind of education did you receive about intimacy and sex? Do you think this might have had an impact on the development of your emotional and sexual life? • Have you had any negative experiences related to sexuality? • Have you had other partners? How did it go sexually? **Current sexual functioning** • What is the atmosphere in which you have sex? Is it conducive to the development of intimacy and sexuality? • Do you practice foreplay (emotional, erotic, and sexual touching)? Do you find it stimulating/exciting? • At the beginning of sexual activity, do you feel sexual desire? Is it spontaneous or does it come on gradually during sexual stimulation? • Do you lubricate? • Is there penetration during sexual activity? Is penetration stimulating/exciting or painful? • Do you ever reach orgasm? • How do you feel physically and emotionally after sexual activities?
3 or 4	**Sexual dysfunctions** • Could you explain to me how it went the last time you had sexual difficulties?

The table shows the specific and sequential questions that should be addressed by the clinicians during assessment. It is recommended to follow the order and the respective sessions to which these questions belong.

session allows the clinician to meet the patient outside the marital dynamics. However, it is essential to note that the clinician cannot conceal secrets that may hinder therapeutic goals (e.g., infidelity). It is therefore essential to inform both patients that anything said in the individual interview could be discussed during the couple consultation.

Next, the clinician will assess the patient's current sexual functioning by asking specific questions about sexual desire, lubrication, arousal, and orgasm, in order to highlight possible sexual dysfunction that is causing sexual distress (American College of Obstetricians and Gynecologist, 2017). It is also necessary to assess whether there is sexual pain related to sexual activities (before/during/after). To facilitate the discussion, the clinician can draw the Masters and Johnson (1966) model (see Fig. 1) to target the sexual difficulties the patient has experienced over the past four weeks. At the end of the interview, the clinician can assess the FSD using standardized and validated questionnaires (see the Validated Questionnaires section for further information). The clinician should also identify the presence of FSD based on the DSM-V (APA, 2013) diagnostic criteria (see Table 1 for the full specifications). In order to synchronically consider all dimensions of the sexual difficulties (emotional, cognitive, behavioral, and interpersonal), patients should be invited to answer, in session or as homework, the questions presented in Fig. 3. The synchronic and diachronic analyses will enable the identification of any reinforcing mechanisms.

The third session will allow the clinician to give a first feedback regarding the sexual dysfunctions encountered and to analyze the precipitating and maintaining mechanisms. If the individuals are consulting as a couple, this will be done during the fourth session. If they are consulting as a couple, each partner will have the opportunity to explain their own difficulties.

Fourth or fifth sessions

The fourth session is designed to present the case conceptualization and to agree upon both therapeutic goals and format. If the patient consults with their partner, this will occur during the fifth session. The clinician will begin with presenting the history and progression of the sexual difficulties (i.e., the result of the diachronic analysis), highlighting the predisposing factors (e.g., sexual myths, childhood sexual abuse), precipitating factors (e.g., postpartum period), and maintaining factors (e.g., negative partner response, avoidance strategies). The clinician will then present the synchronic analysis (see Fig. 3) and formulate hypotheses regarding the sexual difficulties encountered. Conceptualization will show the patient that the clinician understands the difficulties, which could strengthen their therapeutic alliance. Understanding one's sexual functioning and underlying mechanisms, which strengthen motivation in the individuals and assigns them a more active role in therapy.

More importantly, case conceptualization will guide therapeutic goals and the corresponding choice of intervention. Individual, couple, or mixed-formats will be selected based on the clients' best interests. To reinforce a biopsychosocial

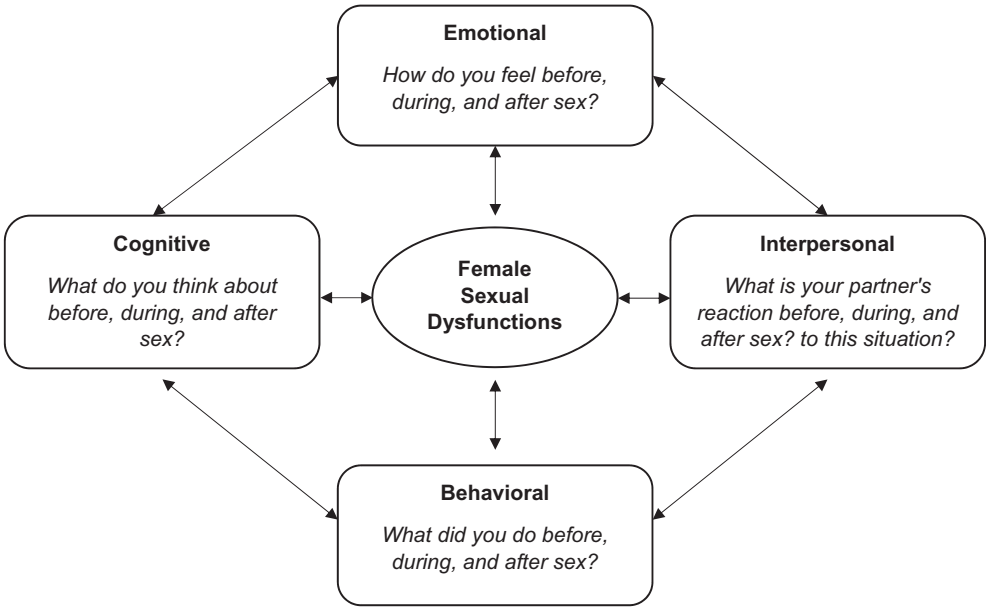

FIG. 3 Synchronic analysis of sexual dysfunctions. Figure representing the cognitive, emotional, behavioral, and interpersonal questions that should be systematically investigated with patients.

treatment approach, the clinician may also suggest for the patient consult other relevant professionals (e.g., gynecologist, psychologist, or urologist).

Validated questionnaires

Questionnaires allow for the objective and standardized assessment of the sexual dysfunctions. The female sexual function index (FSFI, Rosen et al., 2000) and the Female Sexual Distress Scale-revised (FSDS-R, DeRogatis, Clayton, Lewis-D'Agostino, Wunderlich, & Fu, 2008) are both self-report questionnaires and most widely used among clinicians and researchers. These should be administered during assessment, as well as during mid- and post-treatment evaluations.

The female sexual function index (FSFI)

The FSFI (Rosen et al., 2000) assesses female sexual functioning along six dimensions: desire, arousal, lubrication, orgasm, sexual satisfaction, and pain. It is composed of 19 items, assessed on a 6-point Likert scale. The total score ranges from 0 to 36, with a score of 26.55 or lower indicating FSD presence (Wiegel, Meston, & Rosen, 2005). Given this tool's high internal consistency (i.e., Cronbach's alpha of 0.86), it represents a reliable measure for assessing FSDs.

The Female Sexual Distress Scale—revised (FSDS-R)

The FSDS-R (DeRogatis et al., 2008) assesses personal sexual distress. This questionnaire is composed of 13 items assessed on a 5-point Likert scale. The total score ranges from 0 to 52, with a score of 11 or higher specifying the presence of sexual distress. Given the tool's high internal consistency (Cronbach's alpha of 0.86), it represents a reliable measure of FSD.

Treating female sexual dysfunctions

FSDs can be either treated medically or psychologically. In the current section, we only review the latter approach. It is important to note that embarrassment, stigma, lack of options for evidence-based treatments, distance, and cost all represent barriers for women to seek psychological treatment (Stephenson, Zippan, & Brotto, 2021). Currently, no single treatment has been established as the prime treatment for FSDs (for a recent systematic review, see Weinberger, Houman, Caron, & Anger, 2019). A full review of available treatments has recently been summarized in a systematic review by Marchand (2020). Among these, cognitive-behavioral therapy (CBT) is the only approach having shown sufficient evidence for both the treatment and its underlying theory for both female and male sexual dysfunctions (Emanu, Avildsen, & Nelson, 2018; ter Kuile, Both, & van Lankveld, 2010; Wheeler & Guntupalli, 2020). Difficult sex-related cognitions, behaviors, and emotions should therefore be addressed using CBT in combination with other techniques (Laan, Rellini, & Barnes, 2013), which include sensate focus, directed masturbation, systematic desensitization, and pelvic-floor exercises. Mindfulness-based CBT has also been suggested as a recent empirically-based treatment, though clinical trials with rigorous designs are still required to confirm the observed effects (Pyke & Clayton, 2015).

Cognitive-behavioral therapy (CBT)

CBT aims to identify and modify the precipitating and maintaining factors of FSDs. These include the individuals' cognitions (e.g., unrealistic expectations, negative thoughts, dysfunctional schemas) and behaviors (e.g., exposure exercises to target experiential and behavioral avoidance), in order to reduce fear of penetration, pain, or sex-related anxiety (Kane et al., 2019). It often includes a psychoeducation component, providing women with accurate information regarding erotic stimulation, and sexual desire and arousal (Kingsberg et al., 2017). As stated by Kingsberg et al. (2017), psychoeducation is evidently at the core of all evidence-based treatments for all FSDs. It involves providing accurate information regarding the female sexual dysfunction diagnoses, increasing sexual awareness, and discussing predisposing, precipitating, perpetuating, and protective factors (Brotto et al., 2008). The next steps of CBT treatment involves improving sexual skills in both the woman and her partner, as well as increasing reward while reducing punishments within nonsexual aspects of the relationship (ter Kuile et al., 2010). CBT also includes training skills pertaining to couple and emotional communication, as well as developing sensual fantasy. As per traditional CBT, homework exercises are often prescribed within the couple.

Specific components are modified according to the treated diagnoses. In the context of arousal/desire disorder, orgasm consistency is an added component (ter Kuile et al., 2010). It aims to educate the couple on how to enable the woman to reach orgasm during sexual interactions, before both male climax and actual intercourse initiation. Depending on the relevance, it also incorporates coital alignment techniques, to allow direct clitoral stimulation by the penis during sexual intercourse. CBT for orgasmic disorder incorporates sensate focus, directed masturbation, systematic desensitization, and

pelvic-floor exercises, which will be discussed further below. Treatment adaptations for sexual pain include targeting not only pain, muscle tightness, and vaginal penetration, but also anxiety (Al-Abbadey, Liossi, Curran, Schoth, & Graham, 2016). Beyond its original format, CBT also exists under group (Bergeron, Khalifé, Dupuis, & McDuff, 2016), couple (Corsini-Munt, Bergeron, Rosen, Mayrand, & Delisle, 2014), bibliotherapy (Van Lankveld et al., 2006), and online formats (Stephenson et al., 2021).

A more recent and promising therapeutic endeavor is mindfulness-based CBT. In the context of FSDs, mindfulness emphasizes the acceptance of sex-related thoughts and emotions. Based on Brotto and colleagues' work (e.g., Paterson, Handy, & Brotto, 2017), an 8-session group treatment option has been developed. Similarly to CBT, homework exercises include the monitoring of sexual beliefs, desire/arousal complaints, and body image through appropriate worksheets. Individuals are also expected to complete daily mindfulness exercises. Moreover, an online self-guided mindfulness treatment program has also been proposed (Adam, De Sutter, Day, & Grimm, 2020). The intervention consists of seven videos, which proposes increasing mindfulness exercises and combined elements of psychoeducation, diaphragmatic breathing, pelvic movement exercises, foreplay exercises, erotic imagination, directed masturbation, cognitive restructuring, and acceptance of one's womanhood (for the full program, see Adam et al., 2020).

Sensate focus

Sensate focus is considered a validated and important first-line technique for sexual dysfunctions (Laan et al., 2013), with a specific interest for interest/arousal disorder (ter Kuile et al., 2010). Originally coined by Masters and Johnson (1966), sensate focus therapy is a couple-based approach, which consists of gradual touching exercises with the aim of reducing avoidance and sexual-related anxiety, and improving communication within the relationship. Typically, couples will be invited to move from with nongenital touching, to genital touching and, ultimately, intercourse (Kingsberg et al., 2017). Individuals are invited to focus on the sexual acts in which they can directly control the locus of attention, including the voluntary behavioral action of redirecting their attention toward specific physical sensations rather than distracting (e.g., focusing on the partner's experience) or spectatoring. The latter refers to "the tendency to evaluate oneself from a third-person perspective during sex" (Laan et al., 2013). Ultimately, this will help reduce expectations and anxiety related to sexual activities. A full description of the step-by-step treatment can be found in Weiner and Avery-Clark (2014). At each steps, the authors emphasize the need for the partners to hone in on their sensations.

Directed masturbation

Directed masturbation training, incorporating elements of both CBT and mindfulness, has received the most empirical support for orgasmic disorder (Laan et al., 2013). Based on operant and classical conditioning, the objective of the technique is to abandon nonconstructive behaviors that impede on reaching orgasm, with more useful behavior choices (Both & Laan, 2004). This exposure exercise involves progressive, stepwise exposure exercises, beginning with visual and tactile exploration of one's body to genital stimulation (Marchand, 2020). The program incorporates role-playing orgasm, imagining sexual excitement increases, developing sexual fantasy, discovering masturbation techniques, and using vibrators. Similarly to CBT and sensate focus, this technique aims to reduce anxiety and spectatoring, increasing attentional to sexual cues, and challenging sex-related beliefs. A full description of the treatment can be found in Both and Laan's (2004) chapter. Efficacy rates in reaching orgasm following directed masturbation range from 60% to 90% (Both & Laan, 2004; Laan et al., 2013; for a review, see Marchand, 2020). It is especially recommended for women with particular aversion of touching her genitals.

Systematic desensitization

Based on exposure therapy, systematic desensitization aims to reduce symptomatology linked to the sexual difficulty whilst targeting any sex-related feelings of anxiety, shame, or guilt associated with engaging in social activities (Both & Laan, 2004). In the first sessions, the link between orgasm difficulties and anxiety in sexual situations is explained, exposing the rationale for exposure exercises. Individuals work with the clinician to create a hierarchy of feared anxiety-provoking sex-related situations, which can later be arranged according to increasing intimacy. Gradually, patients will expose themselves to the anxiety created by each sexual situation. One will begin with less fear-provoking situations, increasing difficulty with each session. These exposure exercises can be achieved both through imagination and in vivo (live exercises). Exercises are repeated so long as they generate significant distress for the woman. Oftentimes, the exposure exercises are accompanied by muscle relaxation techniques, as well as assertiveness and self-affirmation training. Patients will be encouraged to practice these techniques as homework assignments.

The systematic review by Marchand (2020) highlights that efficacy ranges from 10% to 56% for participants with anorgasmia, with higher success achieved in combination with anxiety medication or inclusion of the partner in the therapy. Recent recommendations warn against the use of systematic desensitization alone as a first line treatment (Laan et al., 2013; Marchand, 2020). While sex-related anxiety may be significantly reduced by the technique, a lack of carry-over effects to more general sexual function has been observed.

Pelvic-floor exercises

Besides pharmacological agents for the treatment of pain in sexual dysfunctions, expert consensus guidelines recommend CBT and pelvic floor physical therapy as a first-line treatment (e.g., Rosen, Dawson, Brooks, & Kellogg-Spadt, 2019), with an emphasis on their cumulative benefits when combined (Rosen et al., 2019). Pelvic floor exercises involve the prescription of specific exercises to relax the pelvic floor muscle, restore its proper function, and retrain the pain receptors. Techniques include stretching, massage, and myofascial trigger points (Rosenbaum & Owens, 2008). This can be optimally treated by a physical therapist specially trained in providing treatment for this sexual dysfunction. The exercises should increase blood circulation and decrease myalgia, improving therefore muscle awareness and muscle relaxation (Padoa, McLean, Morin, & Vandyken, 2021). Evidence for these exercises is multifold, with up to 71% to 80% of women expressing significant decreases in pain (for a review, see Padoa et al., 2021). Further research is warranted to distinguish the superiority of pelvic floor rehabilitation compared to CBT, as both are often combined.

Mini-dictionary of terms

- ***Sexual health***. It is a state of physical, emotional, mental and social wellbeing in relation to sexuality. It is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.
- ***Subjective arousal***. Subjective evaluation of one's sexual experience.
- ***Genital arousal***. The woman's own physical perception of her bodily arousal.
- ***Vasocongestion of the genitals***. The increase in blood flow to the genitals (e.g., clitoris, labia minora), which will then lead to vaginal lubrication.
- ***Negative sexual cognitive schemas***. Cognitive generalities consisting of a set of ideas that people cultivate about sexuality, themselves, as well as how they perceive themselves as a sexual person.

Key facts of female sexual dysfunctions

- Sexual difficulties are encountered by approximately 43%–44% of women and 30% of men.
- Only 25% of women and men who suffer from sexual dysfunctions will dare to consult.
- Female sexual experience is very complex. Clinicians are therefore advised to thoroughly assess each patient's own experience.
- To optimize patient care, assessment should be performed during routine examinations (gynecologist, physician, psychologist).
- While there is not one established empirical treatment for all FSDs, CBT is the only intervention for which both the theory and practice have sufficient evidence.

Applications to other areas

In this chapter, we presented the initial assessment sessions and treatments for FSD. However, partners' sexual functioning is interdependent (Brotto et al., 2016), with women with FSDs being three times more likely to be in relationships with men who suffer from sexual dysfunction themselves (Chew et al., 2020). Male sexual dysfunctions (MSDs) are encountered by approximately 30% of men (Laumann et al., 1999). The DSM-V (APA, 2013) specifies erectile disorder, male hypoactive sexual desire disorder, premature (early) ejaculation, and delayed ejaculation. Masters and Johnson's (1966) sexual response model and Barlow's (1986) cognitive interference model presented earlier are also used to understand MSDs, as men with MSDs more often focus on performance concerns and nonerotic stimuli compared to men without MSDs. This decreases sexual arousal and increases anxious apprehension of sexual activities. Assessment is also based on a biopsychosocial model (Brotto et al., 2016) and the initial assessment sessions presented in this chapter could be applied to MSDs.

As previously mentioned, CBT is the only approach having shown sufficient evidence for both the treatment and its underlying mechanisms for both female and MSDs (Emanu et al., 2018). Other treatments used for males suffering with sexual dysfunctions include sex therapy (e.g., sensate focus), behavioral approaches (e.g., systematic desensitization or pelvic floor muscle rehabilitation), and psychoeducational therapy (Jaderek & Lew-Starowicz, 2019). However, the choice of a given therapy must rest on empirical findings, and the lack thereof in the domain of sexual dysfunctions means clinicians must be aware of such limits when implementing these interventions.

Summary points

- According to the DSM-5 (APA, 2013), female sexual dysfunctions include female sexual interest/arousal disorder, female orgasmic disorder, genito-pelvic pain/penetration disorder, substance/medication-induced sexual dysfunction, and other specified/unspecified sexual dysfunction.
- Assessment must be conducted in accordance with a biopsychosocial and interdisciplinary approach.
- Both pharmacological and psychological approaches have been devised for treating female sexual dysfunctions.
- Cognitive-behavioral therapy is the recommended first-line of treatment for the majority of the female sexual dysfunctions.
- Other adjunct sexual therapy techniques can be implemented, including sensate focus, directed masturbation, systematic desensitization, and pelvic-floor exercises.

References

Adam, F., Day, J., De Sutter, P., & Brasseur, C. (2017). Analyse processuelle des facteurs cognitifs du trouble de l'orgasme féminin. *Sexologies*, *26*(3), 153–160.

Adam, F., De Sutter, P., Day, J., & Grimm, E. (2020). A randomized study comparing video-based mindfulness-based cognitive therapy with video-based traditional cognitive behavioral therapy in a sample of women struggling to achieve orgasm. *The Journal of Sexual Medicine*, *17*(2), 312–324.

Al-Abbadey, M., Liossi, C., Curran, N., Schoth, D. E., & Graham, C. A. (2016). Treatment of female sexual pain disorders: A systematic review. *Journal of Sex & Marital Therapy*, *42*(2), 99–142.

American College of Obstetricians and Gynecologist. (2017). Committee opinion no 706: Sexual health. *Obstetrics & Gynecology*, *130*(1), e42.

Annon, J. S. (1976). The PLISSIT model: A proposed conceptual scheme for the behavioral treatment of sexual problems. *Journal of Sex Education Therapy*, *2*(1), 1–15.

American Psychiatric AssociationPlaceholder Text (2000). Quick reference to the diagnostic criteria from DSM-IV-TR. APA, Washington, DC.

APA. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5*. *Vol. 10*. Washington, DC: American Psychiatric Association.

Bachmann, G. (2006). Female sexuality and sexual dysfunction: Are we stuck on the learning curve? *The Journal of Sexual Medicine*, *3*(4), 639–645.

Barlow, D. H. (1986). Causes of sexual dysfunction: The role of anxiety and cognitive interference. *Journal of Consulting and Clinical Psychology*, *54*(2), 140.

Basson, R. (2005). Women's sexual dysfunction: Revised and expanded definitions. *Canadian Medical Association Journal*, *172*(10), 1327–1333.

Basson, R., Berman, J., Burnett, A., Derogatis, L., Ferguson, D., Fourcroy, J., et al. (2000). Report of the international consensus development conference on female sexual dysfunction: Definitions and classifications. *The Journal of Urology*, *163*(3), 888–893.

Basson, R., Wierman, M. E., Van Lankveld, J., & Brotto, L. (2010). Summary of the recommendations on sexual dysfunctions in women. *The Journal of Sexual Medicine*, *7*(1), 314–326.

Bergeron, S., Binik, Y. M., Khalifé, S., Pagidas, K., Glazer, H. I., Meana, M., et al. (2001). A randomized comparison of group cognitive-behavioral therapy, surface electromyographic biofeedback, and vestibulectomy in the treatment of dyspareunia resulting from vulvar vestibulitis. *Pain*, *91*(3), 297–306.

Bergeron, S., Corsini-Munt, S., Aerts, L., Rancourt, K., & Rosen, N. O. (2015). Female sexual pain disorders: A review of the literature on etiology and treatment. *Current Sexual Health Reports*, *7*(3), 159–169.

Bergeron, S., Khalifé, S., Dupuis, M.-J., & McDuff, P. (2016). A randomized clinical trial comparing group cognitive-behavioral therapy and a topical steroid for women with dyspareunia. *Journal of Consulting and Clinical Psychology*, *84*(3), 259.

Both, S., & Laan, E. (2004). Directed masturbation: A treatment of female orgasmic disorder. In *Cognitive behavior therapy: Applying empirically supported techniques in your practice* (p. 144). Wiley.

Brotto, L. A., Heiman, J. R., Goff, B., Greer, B., Lentz, G. M., Swisher, E., et al. (2008). A psychoeducational intervention for sexual dysfunction in women with gynecologic cancer. *Archives of Sexual Behavior*, *37*(2), 317–329.

Brotto, L., Atallah, S., Johnson-Agbakwu, C., Rosenbaum, T., Abdo, C., Byers, E. S., et al. (2016). Psychological and interpersonal dimensions of sexual function and dysfunction. *The Journal of Sexual Medicine*, *13*(4), 538–571.

Chew, P. Y., Choy, C. L., Bin Sidi, H., Abdullah, N., Roos, N. A. C., Sahimi, H. M. S., et al. (2020). The Association between female sexual dysfunction and sexual dysfunction in the male partner: A systematic review and meta-analysis. *The Journal of Sexual Medicine*, *18*(1), 99–112.

Clayton, A. H., & Juarez, E. M. V. (2019). Female sexual dysfunction. *Medical Clinics of North America*, *103*(4), 681–698.

Conforti, C. (2017). Genito-pelvic pain/penetration disorder (GPPPD): An overview of current terminology, etiology, and treatment. *University of Ottawa Journal of Medicine*, *7*(2), 48–53.

Corsini-Munt, S., Bergeron, S., Rosen, N. O., Mayrand, M.-H., & Delisle, I. (2014). Feasibility and preliminary effectiveness of a novel cognitive-behavioral couple therapy for provoked vestibulodynia: A pilot study. *The Journal of Sexual Medicine*, *11*(10), 2515–2527.

DeRogatis, L., Clayton, A., Lewis-D'Agostino, D., Wunderlich, G., & Fu, Y. (2008). Validation of the female sexual distress scale-revised for assessing distress in women with hypoactive sexual desire disorder. *The Journal of Sexual Medicine*, *5*(2), 357–364.

Dias-Amaral, A., & Marques-Pinto, A. (2018). Female genito-pelvic pain/penetration disorder: Review of the related factors and overall approach. *Revista Brasileira de Ginecologia e Obstetrícia*, *40*(12), 787–793.

Dove, N. L., & Wiederman, M. W. (2000). Cognitive distraction and women's sexual functioning. *Journal of Sex & Marital Therapy*, *26*(1), 67–78.

Emanu, J. C., Avildsen, I., & Nelson, C. J. (2018). Psychotherapeutic treatments for male and female sexual dysfunction disorders. In *Evidence-Based Psychotherapy: The State of the Science and Practice* (pp. 253–270). Wiley.

Guthrie, J. R., Dennerstein, L., Taffe, J. R., Lehert, P., & Burger, H. G. (2004). The menopausal transition: A 9-year prospective population-based study. The Melbourne Women's midlife health project. *Climacteric*, *7*(4), 375–389.

Jaderek, I., & Lew-Starowicz, M. (2019). A systematic review on mindfulness meditation-based interventions for sexual dysfunctions. *The Journal of Sexual Medicine*, *16*(10), 1581–1596.

Kane, L., Dawson, S. J., Shaughnessy, K., Reissing, E. D., Ouimet, A. J., & Ashbaugh, A. R. (2019). A review of experimental research on anxiety and sexual arousal: Implications for the treatment of sexual dysfunction using cognitive behavioral therapy. *Journal of Experimental Psychopathology*, *10*(2).

Kaplan, H. S. (1979). *Disorders of sexual desire and other new concepts and techniques in sex therapy*. New York: Brunner/Hazel Publications.

Khajehei, M., Doherty, M., & Tilley, P. M. (2015). An update on sexual function and dysfunction in women. *Archives of Women's Mental Health*, *18*(3), 423–433.

Kingsberg, S. A., Althof, S., Simon, J. A., Bradford, A., Bitzer, J., Carvalho, J., et al. (2017). Female sexual dysfunction—Medical and psychological treatments, committee 14. *The Journal of Sexual Medicine*, *14*(12), 1463–1491.

Laan, E., Rellini, A. H., & Barnes, T. (2013). Standard operating procedures for female orgasmic disorder: Consensus of the International Society for Sexual Medicine. *The Journal of Sexual Medicine*, *10*(1), 74–82.

Laumann, E. O., Glasser, D. B., Neves, R. C. S., & Moreira, E. D. (2009). A population-based survey of sexual activity, sexual problems and associated help-seeking behavior patterns in mature adults in the United States of America. *International Journal of Impotence Research*, *21*(3), 171–178.

Laumann, E. O., Paik, A., & Rosen, R. C. (1999). Sexual dysfunction in the United States: Prevalence and predictors. *JAMA*, *281*(6), 537–544.

Marchand, E. (2020). Psychological and behavioral treatment of female orgasmic disorder. *Sexual Medicine Reviews*, *9*(2), 194–211.

Masters, W. H., & Johnson, V. E. (1966). *Human sexual response*. Boston: Little, Brown and Company.

McCormick, C. M., Lewis, E., Somley, B., & Kahan, T. A. (2007). Individual differences in cortisol levels and performance on a test of executive function in men and women. *Physiology & Behavior*, *91*(1), 87–94.

Meston, C. M., & Stanton, A. M. (2017). Evaluation of female sexual interest/arousal disorder. In *The textbook of clinical sexual medicine* (pp. 155–163). Springer.

Nappi, R. E., Cucinella, L., Martella, S., Rossi, M., Tiranini, L., & Martini, E. (2016). Female sexual dysfunction (FSD): Prevalence and impact on quality of life (QoL). *Maturitas*, *94*, 87–91.

Nobre, P., Gouveia, J. P., & Gomes, F. A. (2003). Sexual dysfunctional beliefs questionnaire: An instrument to assess sexual dysfunctional beliefs as vulnerability factors to sexual problems. *Sexual and Relationship Therapy*, *18*(2), 171–204.

Nobre, P. J., & Pinto-Gouveia, J. (2006). Emotions during sexual activity: Differences between sexually functional and dysfunctional men and women. *Archives of Sexual Behavior*, *35*(4), 491–499.

Nobre, P. J., & Pinto-Gouveia, J. (2008). Differences in automatic thoughts presented during sexual activity between sexually functional and dysfunctional men and women. *Cognitive Therapy and Research*, *32*(1), 37–49.

Nowosielski, K., Wróbel, B., & Kowalczyk, R. (2016). Women's endorsement of models of sexual response: Correlates and predictors. *Archives of Sexual Behavior*, *45*(2), 291–302.

Padoa, A., McLean, L., Morin, M., & Vandyken, C. (2021). The overactive pelvic floor (OPF) and sexual dysfunction. Part 2. Evaluation and treatment of sexual dysfunction in OPF patients. *Sexual Medicine Reviews*, *9*(1), 76–92.

Parish, S. J., Goldstein, A. T., Goldstein, S. W., Goldstein, I., Pfaus, J., Clayton, A. H., et al. (2016). Toward a more evidence-based nosology and nomenclature for female sexual dysfunctions—Part II. *The Journal of Sexual Medicine*, *13*(12), 1888–1906.

Paterson, L. Q., Handy, A. B., & Brotto, L. A. (2017). A pilot study of eight-session mindfulness-based cognitive therapy adapted for women's sexual interest/arousal disorder. *The Journal of Sex Research*, *54*(7), 850–861.

Pyke, R. E., & Clayton, A. H. (2015). Psychological treatment trials for hypoactive sexual desire disorder: A sexual medicine critique and perspective. *The Journal of Sexual Medicine*, *12*(12), 2451–2458.

Rosen, N. O., Dawson, S. J., Brooks, M., & Kellogg-Spadt, S. (2019). Treatment of vulvodynia: Pharmacological and non-pharmacological approaches. *Drugs*, *79*(5), 483–493.

Rosen, R., Brown, J., Heiman, S., Leiblum, C., Meston, R., Shabsigh, D., et al. (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.

Rosenbaum, T. Y., & Owens, A. (2008). Continuing medical education: The role of pelvic floor physical therapy in the treatment of pelvic and genital pain-related sexual dysfunction (CME). *The Journal of Sexual Medicine*, *5*(3), 513–523.

Shifren, J. L., Monz, B. U., Russo, P. A., Segreti, A., & Johannes, C. B. (2008). Sexual problems and distress in United States women: Prevalence and correlates. *Obstetrics & Gynecology*, *112*(5), 970–978.

Stephenson, K. R., Zippan, N., & Brotto, L. A. (2021). Feasibility of a cognitive behavioral online intervention for women with sexual interest/arousal disorder. *Journal of Clinical Psychology*, *77*, 1877–1893.

Tavares, I. M., Moura, C. V., & Nobre, P. J. (2020). The role of cognitive processing factors in sexual function and dysfunction in women and men: A systematic review. *Sexual Medicine Reviews*, *8*(3), 403–430.

ter Kuile, M. M., Both, S., & van Lankveld, J. J. (2010). Cognitive behavioral therapy for sexual dysfunctions in women. *Psychiatric Clinics*, *33*(3), 595–610.

Van Lankveld, J. J., Granot, M., Schultz, W. C. W., Binik, Y. M., Wesselmann, U., Pukall, C. F., et al. (2010). Women's sexual pain disorders. *The Journal of Sexual Medicine*, *7*(1), 615–631.

Van Lankveld, J. J., ter Kuile, M. M., de Groot, H. E., Melles, R., Nefs, J., & Zandbergen, M. (2006). Cognitive-behavioral therapy for women with lifelong vaginismus: A randomized waiting-list controlled trial of efficacy. *Journal of Consulting and Clinical Psychology*, *74*(1), 168–178.

Weinberger, J. M., Houman, J., Caron, A. T., & Anger, J. (2019). Female sexual dysfunction: A systematic review of outcomes across various treatment modalities. *Sexual Medicine Reviews*, *7*(2), 223–250.

Weiner, L., & Avery-Clark, C. (2014). Sensate focus: Clarifying the Masters and Johnson's model. *Sexual and Relationship Therapy*, *29*(3), 307–319.

Wheeler, L. J., & Guntupalli, S. R. (2020). Female sexual dysfunction: Pharmacologic and therapeutic interventions. *Obstetrics & Gynecology*, *136*(1), 174–186.

Wiegel, M., Meston, C., & Rosen, R. (2005). The female sexual function index (FSFI): Cross-validation and development of clinical cutoff scores. *Journal of Sex & Marital Therapy*, *31*(1), 1–20.

Wiegel, M., Scepkowski, L. A., & Barlow, D. H. (2007). Cognitive-affective processes in sexual arousal and sexual dysfunction. In *Kinsey Institute Conference, 1st, Jul, 2003, Bloomington, IN, US; This work was presented at the Aforementioned Conference*.

Wincze, J. P., & Weisberg, R. B. (2015). *Sexual dysfunction: A guide for assessment and treatment*. Guilford Publications.

World Health Organization. (2021). *Sexual health throughout life: Definition*. Retrieved 13 July 2021, from: https://www.euro.who.int/en/health-topics/Life-stages/sexual-and-reproductive-health/news/news/2011/06/sexual-health-throughout-life/definition.