

ORIGINAL RESEARCH—PSYCHOLOGY

Psychological and Interpersonal Dimensions of Sexual Function and Dysfunction

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ABSTRACT

Introduction. There are limited outcome data on the efficacy of psychological interventions for male and female sexual dysfunction and the role of innovative combined treatment paradigms.

Aim. To highlight the salient psychological and interpersonal issues contributing to sexual health and dysfunction; to offer a four-tiered paradigm for understanding the evolution and maintenance of sexual symptoms; and to offer recommendations for clinical management and research.

Methods. An International Consultation assembled over 200 multidisciplinary experts from 60 countries into 17 committees. The recommendations of committee members represent state-of-the-art knowledge and opinions of experts from five continents were developed in a process over a 2-year period. Concerning the Psychological and Interpersonal Committee of Sexual Function and Dysfunction, there were nine experts from five countries.

Main Outcome Measure. Expert opinion was based on grading of evidence-based medical literature, widespread internal committee discussion, public presentation, and debate.

Results. Medical and psychological therapies for sexual dysfunctions should address the intricate biopsychosocial influences of the patient, the partner, and the couple. The biopsychosocial model provides a compelling reason for skepticism that any single intervention (i.e., a phosphodiesterase type 5 inhibitor, supraphysiological doses of a hormone, processing of childhood victimization, marital therapy, pharmacotherapy of depression, etc.) will be sufficient for most patients or couples experiencing sexual dysfunction.

Conclusions. There is need for collaboration between healthcare practitioners from different disciplines in evaluation, treatment, and education issues surrounding sexual dysfunction. In many cases, neither psychotherapy alone nor medical intervention alone is sufficient for the lasting resolution of sexual problems. Assessment of male, female, and couples' sexual dysfunction should ideally include inquiry about: predisposing, precipitating, maintaining, and contextual factors. Treatment of lifelong and/or chronic dysfunction will be different from acquired or recent dysfunction. Research is needed to identify efficacious combined and/or integrated treatments for sexual dysfunction. **Althof SE, Leiblum SR, Chevret-Measson M, Hartmann U, Levine SB, McCabe M, Plaut M, Rodrigues O, and Wylie K. Psychological and interpersonal dimensions of sexual function and dysfunction. J Sex Med 2005;2:793–800.**

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Introduction

To most individuals, it seems obvious that psychological and interpersonal factors play a major role in both the etiology and maintenance of sexual problems. The ways in which love and affection are expressed in one's family of origin, the traumatic sexual experiences one has growing up, the religious, cultural, and societal messages about sex and the ever-increasing impact of the media on one's beliefs and behavior clearly play a role in promoting sexual health or dysfunction. More significantly, individual vulnerability to sexual disruption stems from personality and constitutional/biological dispositions to psychiatric and medical illness as well as the ability to develop and sustain intimate relationships.

This article summarizes the report given to the 2nd International Consultation on Sexual Medicine in Paris, France by the Psychological and Interpersonal Committee of Sexual Function and Dysfunction [1]. We highlight the salient psychological and interpersonal issues that contribute to the development of sexual health and dysfunction and offer a four-tiered paradigm for understanding the evolution and maintenance of sexual symptoms. Additionally, we will critically review the efficacy of psychological interventions for male and female sexual dysfunction, the role of innovative combined treatment paradigms, and offer recommendations for clinical management and research.

Etiological Background of Sexual Dysfunction—Predisposing, Precipitating, and Maintaining Factors

Sexual dysfunction is typically influenced by a variety of predisposing, precipitating, maintaining, and contextual factors [2]. Predisposing factors include both constitutional (e.g., congenital illness, anatomical deformities) and prior life experiences, such as problematic attachments, neglectful or critical parents, restrictive upbringing, sexual and physical abuse and violence. Such predisposing factors are often associated with a greater prevalence of sexual dysfunctions and emotional difficulties in adult life. While some individuals appear less vulnerable and more resilient in the face of stressors, others are more susceptible.

Precipitating factors are those that trigger sexual problems. For any single individual, it is impossible to predict which factors under what

circumstances may impair sexual desire or performance. Nonetheless, an individual's vulnerability to a particular set of circumstances can precipitate sexual dysfunction. For instance, repeated humiliation from one's spouse may cause one man to lose his erection while another man may be unaffected. Similarly, in response to the discovery of a partner's infidelity, one woman may lose sexual desire while another may become more sexually driven. While initially a precipitating event may be problematic and distressing, it need not necessarily lead to a diagnosable dysfunction in the long term. However, repetitive or traumatic problematic sexual experiences damage self-confidence and ultimately result in sexual dysfunction, even in reasonably resilient individuals. They include such things as a conflictual separation or divorce, unsatisfying sexual experiences, a disabling accident or mutilating surgery.

Finally, maintaining factors such as relationship conflict, performance anxiety, guilt, inadequate sexual information or stimulation, psychiatric disorders, relationship discord, loss of sexual chemistry, fear of intimacy, impaired self-image or self-esteem, restricted foreplay, poor communication, and lack of privacy may prolong and exacerbate problems, irrespective of the original predisposing or precipitating conditions. Maintaining factors also include contextual factors that can interfere or interrupt sexual activity, such as environmental constraints or anger/resentment toward a partner. Each of these four factors contributes to, or diminishes, both the individual's and the couples' ability to sustain an active and satisfying sexual life. Often there is not a clear distinction between predisposing and precipitating and precipitating and maintaining factors. For instance as a common predisposing factor, anxiety can increase an individual's vulnerability to sexual dysfunction; it can also serve as a maintaining factor leading to sexual avoidance or arousal inhibition.

The Role of Anxiety in Sexual Dysfunction

Anxiety played a significant role in early psychodynamic formulations of sexual dysfunction and later became the foundation for the etiological concepts of sex therapy established by Masters and Johnson [3] and Kaplan [4]. Kaplan believed that sexually related anxiety became "the 'final' common pathway through which multiple negative influences led to sexual dysfunction."

More recent studies find sexually dysfunctional individuals exhibit heightened levels of anxiety

suggesting a central role of anxiety in the subjective experience and maintenance of sexual disorders. Some studies highlight the significance of anxiety as a trait or stable personality factor, while others have indicated that elevated anxiety levels are confined to the sexual sphere. Correlational evidence exists for the relationship between erectile dysfunction (ED) and anxiety. However, this does not imply causality.

The central role of anxiety reported by sex therapists has been challenged by a number of sophisticated laboratory studies aimed at unraveling the sequence of cognitive-affective processes during sexual arousal in dysfunctional and functional men and, to a lesser extent, women. Contrary to the clinical studies' findings for an inhibition effect of anxiety, the laboratory evidence indicated that anxiety (as induced in the lab setting) either facilitates or does not affect sexual arousal in functional subjects. The evidence for sexually dysfunctional subjects is more mixed [5].

Barlow [6] has offered a theoretical model explaining why anxiety may operate differentially in men with and without ED. His model emphasizes the role of cognitive interference in male arousal. In general, what appears to distinguish functional from dysfunctional responding is a difference in selective attention and distractibility. What sex therapists consider performance demand, fear of inadequacy, or spectating are all forms of situation-specific, task-irrelevant, cognitive activities which distract dysfunctional individuals from task-relevant processing of stimuli in a sexual context [7]. For women, the relationship between anxiety and sexual performance is mixed, with the suggestion that it is more negative than facilitatory [8].

In summary, the laboratory studies on the relationship between anxiety, distraction, general sympathetic activation, and sexual response have convincingly shown that anxiety is not universally disruptive to sexual functioning. In addition, results indicate that the anxiety–sexual response relationship is complex and that the term “anxiety” is too broad for comprehensively describing the variety of factors that can disrupt sexual arousal and functioning. The available evidence indicates that the level and the nature of anxiety and its history are important determinants. Whereas moderate levels and relatively “safe” settings may catalyze sexual arousal, higher levels, less personal control, or a chronic history of anxiety seem to impair sexual functioning [9].

Depression and Sexual Function

The relationship between depression and sexual functioning is of considerable interest to clinicians and researchers as both affective and sexual disorders are highly prevalent, are believed to be comorbid, and may even share a common etiology [10,11]. It is generally agreed that the relationship between depressive mood and sexual dysfunction is bidirectional and further complicated by the sexual side-effects of antidepressant [12].

The empirical evidence confirms a prominent role of depression in sexual dysfunction. While the exact direction of causality is difficult to ascertain, the data not only indicate a close correlational relationship between depression and sexual disorders but also support a functional significance of mood disorders in causing and maintaining sexual dysfunction. Compared with functional controls, sexually dysfunctional men and women exhibit both higher levels of acute depressive symptoms and a markedly higher lifetime prevalence of affective disorders.

Interpersonal Dimensions of Sexual Function and Dysfunction

Clinically, it has been observed that sexual problems are sometimes the cause and sometimes the result of dysfunctional or unsatisfactory relationships. These observations generally stem from clinical data rather than controlled research with community samples. Often, it is difficult to determine which came first—a nonintimate and nonloving relationship, or sexual desire and/or performance problems leading to partner avoidance and antipathy. The research literature is conflicting, and often difficult to interpret as couples begin therapy with varying degrees of relationship satisfaction.

While the evidence is not conclusive and the studies cited are not randomized controlled trials but primarily Level 3, 4, and 5 research, the findings demonstrate a significant relationship between sexual and relationship functioning. While it is impossible to determine cause and effect relationships with certainty, the literature suggests better long-term outcome when relationship issues are treated and resolved. The relationship and sexual difficulties should be dealt with concurrently so that unresolved relationship issues do not undermine the efficacy of the sexual dysfunction treatment. Clearly, more well-controlled studies need to be conducted in this area.

Love and Intimacy

It would be neglectful to discuss psychological and interpersonal contributions to sexual function and dysfunction without including some reference to the importance of love and intimacy. While cultures vary enormously in the degree to which they consider love important for marriage, or even, the importance of love at all in committed relationships, most individuals in Western countries believe that emotional intimacy and feelings of love enhance and sustain sexual satisfaction and pleasure.

While not typically discussed in scientific discourse or evidence-based research, love is a vital ingredient for many individuals in fostering and maintaining strong and satisfying interpersonal and sexual intimacy. Mechanistically treating sexual problems without considering or discussing the quality of caring and love between partners is usually unsuccessful, if not immediately, then over time.

Methodological Problems in Sex Therapy Outcome Studies

There tends to be a paucity of randomized controlled sex therapy outcome studies. This is true for several reasons. Outcome studies in this area are notoriously difficult to design and conduct. The challenge facing researchers is to design studies that not only meet the highest level of evidence-based medicine but that also demonstrate regard for the complexity of sexual life. A narrow mechanistic focus on genital function/dysfunction or successful performance fails to encompass the broader variables that constitute patient and partner sexual satisfaction and dysfunction and disease-specific quality of life [13,14].

There is also disagreement as to what constitutes a good treatment outcome even when function-oriented criteria are employed. For instance, in treating female anorgasmia, what defines success? Achieving orgasm once, achieving orgasm from manual or oral stimulation some specified percentage of occasions, achieving coital orgasm with or without clitoral stimulation, etc.? And, what constitutes success in treating ED? The ability to consummate intercourse (which is a distinctly heterosexual goal but which ignores a wide segment of the population, namely homosexual and autosexual men) or the degree of penile rigidity?

Finally, the emphasis on frequency counts of various sexual acts or initiations as a primary outcome measure is also questionable as it ignores both positive changes in sexual satisfaction and physical and emotional intimacy.

Women's Sexual Complaints and Dysfunction and Dysfunctions: Overview

Female sexual complaints range from a lack of, or diminished sexual desire or interest to pain during both genital and nongenital sexual activities [15]. In addition to formal sexual diagnoses, many women report sexual dissatisfactions that do not involve actual physical impairment but rather, complaints involving lack of pleasure, enjoyment, satisfaction, and passion [16,17]. While these complaints are fairly ubiquitous and important and while they obviously enhance or impede sexual enthusiasm, they tend not to be identified as legitimate outcome measures in most research studies. Nevertheless, it is often the case that with successful treatment, these important sexual parameters change as well as the formal targets of intervention. Moreover, for many women, it is these behaviors that may well constitute the most salient end points of treatment. Sexual performance or genital arousal without pleasure is an unsatisfactory compromise for most women.

Hypoactive Sexual Desire Disorder

Hypoactive sexual desire disorder (HSDD) is the most prevalent female sexual complaint, with prevalence figures ranging from 30% to 35% [18]. Hawton and his colleagues [19] conducted a prospective, noncontrolled study of a community sample of couples who underwent a modified Masters and Johnson treatment program. Sexual desire problems seemed to be alleviated largely or completely in 56% of the couples following treatment. However, 75% of the sample relapsed at 1- to 6-year follow-up. In a later review of the efficacy of sex therapy for sexual dysfunctions, Hawton [20] noted the variable outcome that is often found across studies. He observed that outcome is poorer when the male partner has low desire than when the female partner is the target of treatment.

The efficacy of cognitive-behavioral therapy (CBT) for women with HSDD has been reported in two studies. McCabe [21] found that of the 43% of women complaining of HSDD who underwent 10 sessions of CBT, 54% continued to complain of low desire following treatment. The program

included interventions designed to enhance communication between partners, increase sexual skills, and reduce sexual and performance anxiety. Overall, improvement was noted for 44% of the women. The findings are limited, however, in that many of the women had multiple sexual dysfunctions and there was no control group.

In a study by Trudel et al. [22] comparing cognitive-behavioral interventions specifically formulated to address desire disorders with a control condition, only 26% of the low desire women continued to report this problem at the end of treatment. Compared with the control group, CBT resulted in significant improvement in quality of sexual and marital life, sexual satisfaction, perception of sexual arousal, sexual self-esteem, and less depression and anxiety.

Orgasmic Disorders

No single factor has been shown to be strongly related to orgasmic response and dysfunction in women [23]. In general, women with orgasm difficulties tend to experience more sex guilt [24,25], tend to be less sexually assertive [26,27], and endorse more negative attitudes toward sexual activity and masturbation [24,28]. Women with orgasmic difficulties have been found to be less aware of physiological signs of arousal and orgasm [23,29]. Heiman and Grafton-Becker [23] note that anorgasmic women often fear loss of control during orgasm.

As with other sexual dysfunctions, female orgasmic disorder can be divided into lifelong and acquired subtypes. Different treatment approaches have been shown to be effective for the two subtypes. Directed masturbation training is most efficacious for lifelong and generalized orgasmic problems [29]. This treatment involves self-stimulation in which the woman becomes more aware of the type of stimulation needed to increase her arousal and pleasure and subsequently generalizing this to partner sexual situations. Heiman and Meston [29] note that across all studies involving nearly 600 women seen for between 6 and 14 sessions with directed masturbation, directed masturbation alone was superior to systematic desensitization and directed masturbation with sensate focus was more effective than sensate focus alone. Women with acquired and situational female orgasmic disorder tend to be more distressed about and less satisfied with their overall relationship. Therefore, investigators stress the importance of couples treatment along with sex therapy for the resolution of these problems [30–

32]. In addition to many of the factors mentioned above, acquired orgasmic dysfunction may be the result of medication side-effects, especially antidepressants. Most treatment packages for acquired female orgasm problems include a combination of sex education, sexual skills training, couple's therapy, masturbation, and nondemand touching exercises, as well as interventions to address body image concerns and negative sexual attitudes [29,33].

The Coital Alignment Technique (CAT) [34] was developed specifically to treat female orgasmic disorder. This technique involves a sexual position in which the man lies across the woman, without support of his elbows, and then shifts forward (relative to the standard missionary position) such that the base of his penis makes direct contact with the woman's clitoris. The penile-clitoral connection is maintained by the pressure and counterpressure simultaneously exerted by both partners. One potential pitfall in the use of CAT is that this rather goal-oriented treatment may increase performance pressure and anxiety in the woman.

Heiman [35] notes "treatments for primary anorgasmia appear to fulfill the criteria of 'well-established' whereas situational anorgasmia studies fall into the 'probably efficacious' group." It should be noted that the relative failure of reported treatments of coital anorgasmia may be due to misdiagnosis. A major difficulty with past definitions of orgasmic disorder was that women who were diagnosed with female orgasmic disorder may well have been more accurately diagnosed with a sexual arousal disorder, that is, a lack of sufficient physical or subjective arousal which obviously impeded orgasmic attainment.

Psychological Treatment of Male Sexual Dysfunction

Psychotherapy of Erectile Dysfunction

Men with lifelong and acquired ED typically achieve significant gains both initially and over the long term following participation in sex therapy although men with acquired disorders tend to fare better than those with lifelong problems. Masters and Johnson [3] reported initial failure rates of 41% and 26% for lifelong (primary) and acquired (secondary) ED, respectively. Their 2- to 5-year follow-up of this cohort indicated sustained gains.

In a review of the studies of treatment for ED, Mohr and Bentler [36] wrote, "The component parts of these treatments typically include be-

havioral, cognitive, systemic and interpersonal communication interventions. Averaging across studies, it appears that approximately two-thirds of the men suffering from erectile failure will be satisfied with their improvement at follow-up ranging from six months to six years" (p. 123).

Sex therapy treatment of ED consists of a variety of interventions: systematic desensitization, sensate focus, interpersonal therapy, behavioral assignments, sex education, communications and sexual skills training, and masturbation exercises. It has not been possible to statistically analyze the precise contribution of any of these single interventions to overall success.

Wylie [37] conducted a prospective study with 23 couples where the presenting complaint was ED. Utilizing a combination package of modified sex therapy and behavioral systems couple therapy, 87% of men demonstrated improvement in their sexual symptom within six sessions of treatment. Moreover, the improvements were found in men's sexual confidence and frequency of sexual activity and pleasure derived from sexual activity. The gains were sustained at the 6-month follow-up.

All studies with long-term follow-up indicate a tendency for men to relapse. Hawton et al. [19] noted that recurrence of or continuing difficulty with the presenting sexual problem was commonly reported by 75% of couples; this caused little to no concern for 34%. Patients indicated that they discussed the difficulty with the partner, practiced the techniques learned during therapy, accepted that difficulties were likely to recur, and read books about sexuality.

To prevent relapse, McCarthy [38] has suggested that therapists schedule periodic "booster or maintenance" sessions following termination. Follow-up sessions have been recommended in order to resolve "glitches" that have interfered with progress.

Psychotherapy with Rapid Ejaculation

Since the early 1970s, an array of individual, conjoint, and group therapy approaches employing behavioral strategies such as stop-start [3] or squeeze techniques [39] have been used to treat rapid ejaculation [4,38,40]. Masters and Johnson reported on 432 men who were seen in their quasi-residential model utilizing multiple treatment techniques including the squeeze technique in combination with sensate focus and interpersonal therapy reported failure rates of 2.2% immediately after treatment and 2.7% at the 5-year follow-up.

Other researchers have been unable to replicate Masters and Johnson's success rates. For instance, only 64% of men in Hawton et al.'s [19] study were characterized as successful in overcoming rapid ejaculation.

Cognitive-behavioral therapy as well as multimodal psychodynamic and behavioral treatments are described in review papers; however, there are no documented carefully controlled outcome studies that examine the efficacy of these methods.

Integrated Treatment for Sexual Dysfunction

Medical treatments alone are sometimes insufficient in helping couples resume a satisfying sexual life. The term integrated is used to denote concurrent or step-wise combinations of psychological and medical interventions. Too often, medical treatments are directed narrowly at a specific sexual dysfunction and fail to address the larger biopsychosocial issues. While medical therapies, especially for ED, are generally efficacious (50–90%) approximately 50% of individuals fail to continue treatment. This is partly due to the clinician's failure to address the relevant psychological and interpersonal issues [13]. Examples of relevant biopsychosocial factors include: (i) patient variables such as performance anxiety and depression; (ii) partner variables such as poor mental or physical health and partner disinterest; (iii) interpersonal nonsexual variables such as quality of the overall relationship; (iv) interpersonal sexual variables such as the interval of abstinence and sexual scripts; and (v) contextual variables such as current life stresses with money or children.

There is an emerging literature that demonstrates a synergistic benefit from the use of both psychological interventions and pharmacological treatments for a number of psychiatric conditions including depression, post-traumatic stress disorder, and, to a lesser degree, schizophrenia [41]. It is regrettable that there are so few well-designed randomized control studies focusing on integrated approaches to the treatment of sexual dysfunction. The few studies that exist focus on treatment for ED; there are only a few reports of combined therapies for female dysfunction.

Although to date there are no approved pharmacological treatments for female sexual dysfunction, undoubtedly they will evolve. Psychosocial-contextual issues contribute to the etiology and maintenance of female sexual dysfunction and innovative integrated strategies will be necessary to treat these problems.

Conclusion and Recommendations

Advances in medical and psychological therapies for sexual dysfunctions must address the intricate biopsychosocial influences of the patient, the partner, and the couple. The biopsychosocial model provides a compelling reason for skepticism that any single intervention (i.e., a phosphodiesterase type 5 inhibitor, supraphysiological doses of a hormone, processing of childhood victimization, marital therapy, pharmacotherapy of depression, etc.) will be sufficient for most patients or couples experiencing sexual dysfunction. This is especially true as sexual behavior most often occurs in a dyad with two individuals bringing their unique histories, inhibitions, and motivations to treatment.

The goal of treatment is the restoration of sexual pleasure and satisfying sexual function. The therapist should attempt to understand all of the forces that contributed to the development of the sexual (and relationship) problems even as they are providing treatment. This requires that the clinician takes the time to perform a comprehensive biopsychosocial assessment in order to identify the precipitating, maintaining, and contextual factors responsible for the problem.

While we recognize the reality that all physicians and mental health professionals do not have the same ability to work with biological, cultural, interpersonal, and individual psychological contributions to a given dysfunction, we urge professionals to guard against simplistic thinking about the cause and treatment of any of these problems. We conclude this article by offering the following recommendations:

1. There is a vital need for collaboration between practitioners from different disciplines in the evaluation, treatment, and education surrounding sexual dysfunction. Each discipline has something to contribute to patient care.
2. In many cases neither psychotherapy alone nor medical intervention alone is sufficient for the lasting resolution of sexual problems.
3. Assessment of male, female, and couples' sexual dysfunction should ideally include inquiry about: predisposing, precipitating, maintaining, and contextual factors.
4. Treatment of lifelong and/or chronic dysfunction will be different from acquired/recent dysfunction.
5. Research is needed to identify efficacious combined and/or integrated treatments for sexual dysfunction.

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