Female sexual dysfunction: Assessment
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Abstract
Female sexual dysfunction (FSD) is a common complex clinical condition, with multiple etiologies, association and pathophysiological correlations. This review includes the definition, etiology, and diagnosis of FSD. It calls for a bio psychosocial approach to FSD management, which incorporates, but is not limited to, only the psychological aspects of FSD.

Keywords: Sexual dysfunction, Female sexual interest/arousal dysfunction, Female orgasmic disorder, Sexual pain disorders, Sexual distress.

Definition
The World Health Organization defines FSD as “the various ways in which a woman is unable to participate in a sexual relationship as she would wish” 1 A clinically useful definition of FSD is “the persistent/recurring decrease in sexual desire or arousal, the difficulty/inability to achieve an orgasm, and/or the feeling of pain during sexual intercourse” 2

Just as there are various stages of the female sexual response, different types of FSD involve specific phases of sexual function. Hypoactive sexual disorder (HSDD), now termed FSIAD (female sexual interest/arousal dysfunction) is the persistent or recurrent absence of sexual fantasies/thoughts and/or desire for sexual activity. Female sexual arousal disorder (FASD) is the recurrent inability to attain sexual activity, or maintain it till completion, e.g., adequate lubrication, expansion/swelling of the external genitals. Orgasmic disorder is the persistent or recurrent difficulty, delay in or absence of attaining orgasm. A clinical state of female sexuality is classified as dysfunction only if it leads to personal distress or difficulty in relationship with the sexual partner. Thus FSD is defined in couple-centered terms rather than woman-centred terminology.

Sexual pain disorders include dyspareunia, vaginismus and noncoital sexual pain disorder. Dyspareunia is the recurrent or persistent genital pain associated with sexual intercourse, while vaginismus is the recurrent or persistent involuntary spasm of the musculature of the outer third of the vagina that interferes with vaginal penetration. Non coital sexual pain disorder is defined as recurrent or persistent genital pain induced by non coital sexual stimulation. These distinctions are important as they influence choice of therapy.

Sexual distress is a distinct aspect of sexuality which impacts FSD. This includes concerns such as distress about sex life, guilt about sexual difficulties, stress about sex, feeling of sexual inadequacy, regrets about sexuality, embarrassment about sexual problems, and dissatisfaction with sex life. 3 Sexual distress is not a specific FSD, but has to be mitigated if optimal sexual function is required.

Philosophy of Management
A few words on the philosophy of management of FSD are described here. FSD can be a result of biological (biomedical), problems intra-psychic or inter-personal (psychogenic) conflicts, or a combination of these factors. Hence management of FSD calls for a comprehensive approach which focuses on the biological, psychological, and the environmental factors relevant to a particular individual. 4

Though a patient-centered approach should be followed in every sphere of medicine, 5 nowhere is this truer than in sexual dysfunction. As every individual with FSD has a unique biomedical, psychological, interpersonal and environmental history, her management plan needs to be individualized. Such an approach helps improve the effectiveness of the intervention, enhances acceptability, and ensures active patient participation. Therefore, the bio psychosocial model of health should be followed while approaching a woman with FSD.

Patient-centered approach 6 has been defined as “care that is respectful of and responsive to individual patient preferences, needs, and values” and that ensures “that patient’s values guide all clinical decisions.” In FSD as well, patient centered care (PCC) is necessary if one is to achieve expected therapeutic outcomes. PCC, in the context of FSD, implies understanding the patient’s background, her attitudes, beliefs, knowledge, and
misconceptions about sexuality, fertility, and related issues. It also includes understanding the social and physical environment that she lives in, and requires an in-depth analysis of the biological status of the patient with FSD, viz, her medical, endocrine, gynaecological and urological health.

The concept of PCC in FSD, however, goes beyond the individual. Sexual function is not possible without a partner. Therefore, FSD counseling and management require the use of a couple-centered approach, also termed by use as couple-centered care (CCC). At times, the entire family gets involved in a young couple's personal life, especially in traditional South Asian families, where the young couple has to face pressure from older family members to prove their fertility and fecundity immediately after marriage. In select cases, it is possible that counseling is broadened to include important family members. Another clinical scenario where family counseling may be required is when an elder female relative accompanies a patient with FSD to the clinic, and agrees to take partial responsibility for therapeutic patient education (TPE).

TPE is an integral part of sexual counseling, even though the term has not been used so far in this context. Educating the patient with FSD about the anatomy, physiology, and psychology of sexuality, the possible pathophysiological mechanisms of sexual dysfunction, and available treatment modalities is in itself an important therapy. Understanding these aspects of health and illness forms the basis of any successful management strategy in FSD.

Shared decision making (SDM) is another important philosophy in the management of FSD. Shared medical decision making is a process by which patients and providers consider outcome probabilities and patient preferences and reach a healthcare decision based on mutual agreement. For FSD management to be successful, SDM is essential. SDM is possible only if the patient is empowered by means of TPE, to understand her condition. Hence, TPE becomes an indispensable part of counseling in FSD.

Patients with FSD must be viewed as human beings, in a holistic manner. Therefore, stress management, or specifically, coping skills training (CST) becomes an important part of counseling.

**Epidemiology**

FSD is a commonly encountered condition. While it is difficult (and unfair) to conduct inter-gender comparisons, sexual dysfunction seems to be more common in women than in men. In various studies, 43% to 76% of women have reported some form of sexual dysfunction or difficulty. FSD is associated with increased age, lower education, higher or lower income, lower urinary tract symptoms, cancer survivors and diabetes. History of sexual abuse, trauma to genitalia, and use of antidepressants is also associated with FSD. Poor interpersonal relationship with spouse or partner is an important determinant of FSD.

Studies from Pakistan, and neighbouring regions of India and Iran reveal high prevalence of FSD in these countries.

**The Biopsychosocial Model**

The bio psychosocial model of health integrates biomedical, psychological and social aspects while analyzing the etiology, and suggesting therapeutic interventions, for any clinical challenge. This model is perfectly suited for the study of a syndrome as complex as FSD. Various factors are necessary for optimal female sexual function. As a corollary, the same factors contribute to FSD (Table-1). The female genital tract is a complex organ with varied histological development. The integrity of the external genitalia, especially the clitoris, plays an important role in sexual function. Anatomical abnormalities related to the

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genital tract, may lead to FSD, especially pain. Possible causes include female genital mutilation, endometriosis, fibroids, uterine cancer, and genitourinary infection. Urinary tract infections, painful bladder syndrome, and urinary incontinence can also cause FSD.\textsuperscript{13}

An intact nervous system, including peripheral, autonomic and central nervous systems, is essential for optimal sexual function. Diabetic neuropathy and other metabolic neuropathies, may lead to vulvodynia.\textsuperscript{14} Autonomic neuropathy may be a mediator of orgasmic disorders, while central nervous system disorders such as multiple sclerosis and spinal cord injury also cause FSD.\textsuperscript{13}

An intact vascular system is essential if sexual response, including pelvic vasocongestion, is to be achieved. This may be compromised in atherosclerotic disorders, and exacerbated by coronary artery disease, hypertension and diabetes mellitus. Drugs such as beta blockers, which cause vasoconstriction, may precipitate FSD.\textsuperscript{13}

Both oestrogen and androgens are necessary for female sexual function. While oestrogen deficiency leads to vaginal dryness, dyspareunia and vulvo vaginal burning, androgen deficiency is linked with decreased lipid, fatigue, lack of sexual motivation, and mood changes. DHEAS deficiency may be a putative cause of FSD. Thyroid and prolactin levels influence sexual function as well.

Psychological factors play an important role in FSD. Attitude towards sex, formed by socio-cultural environment; premarital exposure to sex; sexual orientation; and fear of pregnancy or sexually transmitted disease influence sexual function. Interpersonal relationship with the partner are a major determinant of sexual function. Sexual disorders, in fact, can be classified as generalized or situational, based upon whether they occur with all or with specific partners.\textsuperscript{14} While it is difficult at times to differentiate between psychological and psychiatric factors, the latter do have a distinct role to play in the pathogenesis of FSD. Depression and FSD have a bidirectional relationship, and are often associated with each other. Anti-depressant drugs, which act by increasing serotonin levels, e.g., fluoxetine, may precipitate FSD.\textsuperscript{13}

The social environment may worsen FSD in many ways. Physical factors such as lack of privacy, lack of comfortable surroundings, and inability to procure or use appropriate clothing may influence sexual function negatively. A conservative society where one is not allowed to discuss sexual issues freely, or where the very essence of sexuality is frowned upon, may predispose to FSD.

**Assessment**

A detailed and systematic approach to assessment of FSD is required, to ensure appropriate management. This involves an empathic history taking, a comprehensive general physical examination, detailed local examination, and prescription of rational investigation.

History should be taken in a comfortable and relaxed environment which offers privacy. The counsellor should exhibit empathy and confidence. The necessary attributes of the environment, the counsellor, and details of verbal and non-verbal language to be used have been detailed in ALLIANCE guidelines on male sexual dysfunction. These guidelines list the 5 Es of effective sexual history taking: experience, etiquette, empathy, ethnic [cultural] understanding, and external environment conducive for relaxation. A basic framework must be followed for history taking, ensuring that less threatening and more remote aspects of sexuality are explored before moving on to current or threatening issues.\textsuperscript{4}

Various screening and diagnostic tools have been validated for use in women (Table-2). References for a simple six item tool, the Female sexual function index (FSFI)-6, and the longer FSFI, are listed.\textsuperscript{15,16}

**Summary**

FSD is a heterogenous condition which causes significant distress to both the affected woman and her partner. FSD should be approached as all other diseases are, and should not be attributed solely to psychological causes until all possible biomedical etiologies are ruled out. Its multifactorial etiology and presentation creates a complex clinical challenge. This can be overcome by a systematic, empathic approach, including history taking, general and local examination, investigations and rational treatment.

**References**

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