Hypoactive Sexual Desire Disorder: A Review of Epidemiology, Biopsychology, Diagnosis, and Treatment

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ABSTRACT

Introduction: Hypoactive Sexual Desire Disorder (HSDD) is defined in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Revised* (DSM-IV-TR) as persistent deficient sexual fantasies and desire for sexual activity that causes marked distress or interpersonal difficulty. In the *Diagnostic and Statistical Manual of Mental Disorders*, *Fifth Edition* (DSM-5), HSDD has been subsumed by Female Sexual Interest/Arousal Disorder. However, decades of research based on DSM-IV-TR HSDD criteria form the foundation of our understanding of the essential symptom of distressing low sexual desire, its epidemiology, clinical management, and treatment.

Aim: This publication reviews the state of knowledge about HSDD.

Methods: A literature search was performed using terms HSDD and female sexual dysfunction (FSD).

Main Outcome Measures: Physicians acknowledge that FSD is common and distressing; however, they infrequently address it, citing low confidence, time constraints, and lack of treatment as barriers.

Results: HSDD is present in 8.9% of women ages 18 to 44, 12.3% ages 45 to 64, and 7.4% over 65. Although low sexual desire increases with age, distress decreases; so prevalence of HSDD remains relatively constant across age. HSDD is associated with lower health-related quality of life; lower general happiness and satisfaction with partners; and more frequent negative emotional states. HSDD is underdetected and undertreated. Less than half of patients with sexual problems seek help from or initiate discussions with physicians. Patients are inhibited by fear of embarrassing physicians and believe that physicians should initiate discussions. The Decreased Sexual Desire Screener, a tool for detecting and diagnosing HSDD, is validated for use in general practice.

Conclusion: Women can benefit from intervention in primary care, behavioral health and sexual medicine settings. Psychotherapeutic and pharmacological interventions aim to enhance sexual excitatory process and decrease inhibitory processes. Flibanserin, the first centrally acting daily medication for HSDD, was recently approved in the US for premenopausal women.

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Key Words: Hypoactive Sexual Desire Disorder; Female Sexual Dysfunction; Distressing Low Desire; Female Sexual Interest/Arousal Disorder; Flibanserin

INTRODUCTION

Low or decreased sexual desire that causes personal distress, the core symptom of Hypoactive Sexual Desire Disorder (HSDD) as defined in the *Diagnostic and Statistical Manual, Fourth Edition, Revised* (DSM-IV-TR),[1] is a relatively common but commonly undiagnosed problem that significantly affects the lives of approximately 8.9% of U.S. women between the ages of 18 and 44, 12.3% ages 45 to 64, and 7.4% over 65.[2] Women can benefit from behavioral and pharmacological interventions. The first barrier to providing this benefit is detection and diagnosis of the disorder. However, the private and personal nature of sexual activity and the potential for feelings of shame, inadequacy, and embarrassment create unique challenges to effective communication about sexual health for both patient and physician. These barriers, combined with lack of awareness of the prevalence and opportunity to treat HSDD on the part of both patient and clinician, are among those responsible for current underdetection and undertreatment. The goal of this paper

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report is to describe the epidemiology and impact of HSDD in the context of female sexual dysfunction in general, discuss etiological factors, strategies for screening and diagnosing, and comment on existing and emerging treatments.

In the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5), HSDD has been subsumed by Female Sexual Interest/Arousal Disorder (FSIAD).[3] This revision in the nomenclature remains controversial,[4–6] Regardless of the merits of the change in diagnostic criteria, several decades of research based on the DSM-IV-TR criteria for HSDD form the foundation of our understanding of the essential symptom of distressing low sexual desire, its epidemiology, clinical management, and treatment. In fact, assertions about the epidemiology of FSIAD have been based on extrapolation of studies using HSDD rather than FSIAD criteria.[5] The purpose of this publication is to review the state of knowledge about HSDD that is based on the DSM-IV-TR criteria.

DEFINING HYPOACTIVE SEXUAL DESIRE DISORDER

HSDD was defined in the DSM-IV-TR as persistent or recurrent deficient (or absent) sexual fantasies and desire for sexual activity that causes marked distress or interpersonal difficulty and is not better accounted for by another psychiatric disorder (except another sexual dysfunction), problems in the relationship, or due exclusively to the direct effect of a substance, medication, or general medical condition.[1] The American Urological Association (AUA) added to this definition an absence of sexual thoughts and a lack of desire in response to sexual stimulation. A further modification of the DSM definition is the specification that the decrease in interest in sex must exceed that normally observed with increasing age and with the duration of sexual relationships.[7–9,10]

HSDD may be subtyped as "due to psychological factors" when these play the major role and medications, substances, and medical conditions play no role; or "due to combined factors" when, in addition to psychological factors, substances or medical conditions contribute to but are not the exclusive cause of hypoactive desire. HSDD that is due *exclusively* to a general medical condition or medication is considered to be "sexual dysfunction due to a medical condition" or "substance-induced sexual dysfunction." HSDD is usually not diagnosed when the sexual dysfunction is due exclusively to another psychiatric disorder (other than another sexual dysfunction) such as major depressive disorder, unless the decreased desire predated the depression or is "a focus of independent clinical attention."[1]

HSDD may be lifelong (no prior history of normal functioning) or acquired (previous normal functioning) and may occur only in limited circumstances (situational) or affect all aspects of sexual experience (generalized). This discussion focuses on generalized acquired HSDD (i.e. occurring after previously normal levels of desire and in all situations).

The main difference between the DSM-IV-TR and DSM-5 is the merger of desire and arousal into the single FSIAD.[3,11] In DSM-5 severity is graded as mild, moderate, and severe; and symptoms must be present for at least 6 months during more than 75% of encounters. Both DSM-IV-TR and -5 classify their respective disorders as lifelong or acquired and generalized (all partners, activities, forms of sexual expression) or situational (certain partners, practices).

As previously mentioned, this reclassification remains controversial. Proponents offer a number of reasons for combining the two. These include difficulty in clearly defining desire, the observation that women often have sexual activity in the absence of desire, the relatively low frequency of fantasy in women, the complexity of understanding spontaneous vs responsive desire, and the common co-occurrence of decreased desire and low arousal.[12] Advocates of the DSM-5 FSIAD diagnosis assert that a circular model in which arousal may precede desire, discussed below, rather than a linear model in which desire precedes arousal, better describes female sexual response and supports the diagnostic merging of desire and arousal.[6] Those opposed to the reclassification, citing evidence from nontreatment studies of HSDD[13] and randomized trials of flibanserin,[14] describe significantly different symptom syndromes in women who met DSM-IV-TR criteria for HSDD and FSIAD. They argue that the diagnosis of FSIAD is based on clinical judgment and expert opinion rather than empirical evidence.[5,11,15] They conclude that merging these 2 distinct clinical syndromes will lead to unreliable diagnoses, obscure understanding of response to treatment, and result in excessive variability in the natural history and course of illness.[15] Critics also point out the lack of empirical evidence justifying the rejection of diagnoses based on the linear model of sexual response and replacing it with one based exclusively on a circular sexual response.[5]

HSDD and Other Female Sexual Dysfunction

HSDD is a category of Female Sexual Dysfunction (FSD), which has been classified in terms of the affected stage of the "sexual response cycle" as it is classically conceived: desire, arousal, and orgasm. DSM-IV-TR Female Sexual Arousal Disorder (FSAD) is characterized by a personally distressing absence or inadequacy of the emotional and physical manifestations of sexual excitement, including genital lubrication and swelling. Orgasm phase disorders are characterized by delayed, infrequent, or absent orgasm or markedly reduced intensity of orgasmic sensation on almost all or all occasions. A fourth category of FSD includes the DSM-IV-TR Sexual Pain Disorders, Dyspareunia, and Vaginismus, which are combined in DSM-V into Genitopelvic Pain/Penetration Disorder (GPPPD). Not included in DSM, noncoital pain, characterized by genital pain with noncoital sexual activity, also is described.[16] A central tenet of all these disorders is that they are characterized by personal distress, which may be mild, moderate, or severe (DSM-5).