Assessment of Female Sexual Dysfunction

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ABSTRACT
Female sexual dysfunction is a growing problem in our country which is coming into recognition due to ongoing research in the field of sexual dysfunction. Along with development in other areas of sexual dysfunction, researchers are also trying to develop new assessment tools for the same.Earlier developed scales were mainly screening tools but later on scales for diagnosis and measuring treatment response were developed. In order to assess patient adequately and manage them, use of validated instruments having good reliability and validity is essential. Most of the scales are self-rated, brief and sensitive to treatment change. But still more research is needed to validate these instruments in repeated settings.

KEYWORDS: Female sexual dysfunction, PLISSIT model, ALLOW model, Assessment of FSD

INTRODUCTION
Female sexual dysfunction (FSD) is a common clinical condition, with multiple etiologies including biological, psychological and social factors contributing to the illness [1]. Biological factor includes structural abnormalities, endocrine disturbances and defect in nervous system; psychological factor includes interpersonal conflict, past experiences and psychiatric illnesses while social factor includes lack of privacy and societal stigmas [2].Therefore, management of FSD should imply a multimodal approach which focuses on the biological, psychological and the environmental factors relevant to that particular individual. Such an approach helps improve the effectiveness of the intervention, enhances acceptability, and ensures active participation of patient in the management plan [3]. 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" [3].A clinically useful definition of FSD is "the persistent/recurring decrease in sexual desire or arousal, the

ASSESSMENT MODELS
For appropriate management of FSD a detailed and systematic approach to assessment of FSD is required. This involves a detailed history, a comprehensive general physical examination, detailed local examination, and appropriate investigation relevant to individual patient [3]. History should be taken in a comfortable and relaxed environment which offers privacy to the patient and her partner. ALLIANCE guidelines list the '5 Es' of effective sexual history taking i.e. experience, etiquette, empathy, ethnic (cultural) understanding, and external environment conducive for relaxation [2]. History taking

should include less threatening and remote aspects of sexuality are explored more before moving on to current or threatening issues.The PLISSIT model is used to initiate discussions about sexual dysfunction and its management [5]. The ALLOW model facilitates completion of the sexual history and initiation of treatment or further evaluation[5].

The PLISSIT model[5]

Permission - Obtain permission from the patient to discuss sexuality (e.g., ask all patients about their sexuality.
Limited Information-Give limited information (e.g., inform the patients about normal sexual functioning)
Specific Suggestions- Patients are given suggestions about their particular complaints (e.g., advising patients to practice self-massage).
Intensive Therapy-Consider intensive therapy with a sexual health specialist.

The ALLOW model[5]

Ask-Ask the patient about sexual function and activity.
Legitimize- Validate problems and acknowledge at the same time.
Limitations-Identifying limitations to the assessment of sexual dysfunction.
Open up-Open up the discussion, including potential referral.
Work together-Work with the patient to develop goals and a management plan.

RELEVANCE OF RATING SCALES IN ASSESSMENT OF SEXUAL DYSFUNCTION IN FEMALES

Although the diagnosis of FSD currently relies on non-standardized clinical interview, a number of assessment instruments have been developed recently that permit the evaluation of multiple dimensions of sexual function and sexual satisfaction, as well as changes in those dimensions over time [6]. Questionnaires are useful to assess sexual function like the International Index of Erectile Function questionnaire for male sexual dysfunction, but there are no such instruments for female sexual dysfunction. A major reason for the lack of a standardized instrument is the continuously changing of the definition of female sexual dysfunction. Earlier developed self-assessment instruments used to be one-dimensional and, therefore, are not adequate for the current understanding of female sexual dysfunction. Nowadays, multi - dimensional instruments have ability to assess each and every aspect of sexual dysfunction. Currently available self-report questionnaires were developed mainly for the purpose of epidemiologic tools or to determine the changes due to pharmacologic treatment. These self-report questionnaires are not diagnostic instruments yet they can complement the overall evaluation of the patient with sexual dysfunction[7].

Assessment tools can be classified in many different ways. It can be screening tool or diagnostic; self-rated or clinician rated. To be of good quality, an assessment tool should have good reliability and validity. Reliability refers to the replicability or consistency of measurement.Validity addresses the

essence of what is being measured; it reflects the degree to which an instrument measures what it meant to measure.

ASSESSMENT TOOLS

Various screening and diagnostic tools have been validated for FSD which includes Golombok Rust Inventory of Sexual Satisfaction, Derogatis sexual function inventory, Derogatis interview for sexual function, Female sexual function index, Sexual function questionnaire, Brief sexual function index for women, Female change in sexual function questionnaire, Female sexual distress scale, FSFI[6].

The Golombok Rust Inventory of Sexual Satisfaction(GRISS; 1987)

This questionnaire is used for knowing the presence and level of sexual problems. It consists of 28 items. It provides overall scores of the quality of sexual functioning within a relationship.The two-separate male and female scales are shown to have high reliability and validity. It has 12 subscales which includes premature ejaculation, anorgasmia, impotence, vaginismus, non-communication, infrequency, male and female avoidance, male and female non-sensuality, and male and female dissatisfaction are shown to have good reliability and validity[8].

The Brief Index of Sexual Functioning for Women (BISF-W; 1994)

It consists of 22 items. Scoring technique provides composite as well as domain scores for thoughts/desires, relationship satisfaction, arousal, frequency of sexual activity, receptivity/initiation, pleasure/orgasm, andproblems affecting sexual function. Most items are arranged in Likert-type format to rate the frequency of occurrence of sexual desire, arousal or satisfaction associated with common sexual behaviors [9,10].

The Sexual Desire Inventory (SDI; 1996)

It is a brief scale consisting of 14 items meant to measure the multidimensional construct of sexual desire in a dyadic context. Four items are scored on an 8-item response scale from 0 (not at all) to 7 (more than once a day) concerning frequency of desire. The remaining items were answered on a 9-point Likert scale ranging from 0 (no desire) to 8 (strong desire). Possible score ranges from 0 to 112. It measures sexual desire quantitatively in cognitive terms [10].

The Derogatis Interview for Sexual Functioning (DISF/DISF-SR; 1997)

The Derogatis Interview for Sexual Functioning (DISF/DISF-SR) is a semi-structured interview comprised of 25 items and reflects quality of sexual functioning in a multi-domain format. The DISF-SR is a matching self-report inventory.It includes questionnaire suitable for both men and women.There are three distinct levels i.e. discrete items, functional domains and aggregate summary (total) score in which DISF series are designated to be interpreted.

DISF includes five primary domains of sexual functioning: sexual cognition/fantasy, sexual arousal, sexual behavior/experience, orgasm and sexual drive/relationship. Apart from this, an aggregate DISF total score is calculated to summarize quality of sexual functioning across the five primary DISF domains. Approximately 12–15 minutes are required for administration of both DISF and DISF-SR. Inter-rater reliability estimates for the DISF interview were also very good. The DISF/DISF-SR has demonstrated good inter-rater reliabilities, discriminative validity and sensitivity [11].

The Female Sexual Function Index (FSFI; 2000)

The Female Sexual Functioning Index (FSFI)is a 19 item self-report inventory designed to measure the quality of female sexual functioning. The FSFI comprises six domains i.e. desire, subjective arousal, lubrication, orgasm, satisfaction and pain). The FSFI was initially validated on a clinically diagnosed sample of women with female sexual arousal disorder (FSAD). Subsequently, the validation statement was extended to include women with a primary clinical diagnosis of Inhibited Female Orgasm Disorder or HSDD. It has good internal consistency, reliability, coefficients and discriminant validity (that is, patients versus controls) [12,13].

The Menopausal Sexual Interest Questionnaire (MSIQ; 2004)

It is a 10-item scale that assesses three domains of sexual function i.e. desire, responsiveness, and satisfaction and is specifically designed for use in menopausal women. The Menopausal Sexual Interest Questionnaire (MSIQ) had high reliability, construct validity, sensitivity, and specificity [14].

The Sexual Function Questionnaire (SFQ)

It was developed in 2002 to assess multiple dimensions of female sexual function and sexual satisfaction. SFQ has 34-item and eight domains which includes desire, physical arousal/sensation, physical arousal/ lubrication, enjoyment, orgasm, pain, partner relationship and cognition. The distinction between the two domains of physical arousal reflects the distinction between subjective and physiological aspects of arousal disorder [15].

The Personal Experiences Questionnaire (PEQ)

It was developed by Dennerstein and her colleagues for assessing the sexual functioning of middle-aged and older women. The original version of the PEQ have 19-item inventory, which reflects six major dimensions: feelings for partner, sexual responsivity, sexual frequency, libido, vaginal distress/dyspareunia and partner problems. Internal consistency and test–retest reliability coefficients were within the acceptable range for the most part but several coefficients were rather low[16].

The Profile of Female Sexual Functioning (PFSF)

It is a self-report inventory developed by Proctor & Gamble Pharmaceuticals Inc. (Mason, OH, USA) for women suffering from low sexual desire. This instrument was evaluated in 332 oophorectomized women with hypoactive sexual desire disorder (HSDD) and 258 age-matched non-oophorectomized controls. It includes 37 items organized into seven domains (sexual desire, arousal, orgasm, sexual pleasure, sexual concerns, sexual responsiveness and sexual self-image), characterizing female sexual function in menopausal women with HSDD. PFSF have excellent reliability and validity. Test–retest and internal consistency reliability were well within accepted limits. This instrument is specifically designed for measurement of sexual desire in women with low libido. A brief form of the PFSF has also recently been developed[17,18].

The Sexual Interest and Desire Inventory (SIDI)

It is a brief, clinician-administered rating scale specifically designed for measuring severity and change in response to treatment of HSDD in premenopausal women. Initially it had 17-items, which has since been paired down to a 13-item rating scale. SIDI have high internal consistency reliability (α=0.90), and has demonstrated discriminant validity relative to cases versus non-cases of HSDD, and has shown good convergent validity with domains from the FSFI in the same study sample. The SIDI has a somewhat unique measurement format in that items address both intensity and frequency of sexual events [19].

Female Sexual Distress Scale

It is a self-reported, unidimensional scale which measures sexually related personal distress. 'R' version has an additional desire item. It contains 12 items. It is very easy to use and takes approximately 5 minutes time to administer it. It is a good scale to differentiate FSD patients from normal and is also sensitive to treatment induced changes. A cutoff score of ≥15 is kept as satisfying the criterion for personal distress [20].

Structured Diagnostic Method (SDM)

It is a novel instrument which is being used to diagnose subtypes of FSD in clinical studies. It consists of four sexual assessment questionnaires (SAQs) followed by a structured interview [21]. Its components are:

1. Life satisfaction checklist which contains nine items assessing overall quality of life, including a question specific to sexual function. Its domains are: life as a whole, self-care, vocational situation, financial situation, leisure situation, sexual life, partner relation, family life and contact with friends.
2. Subset of questions regarding sexual function from the Medical History Questionnaire. Medical history questionnaire consists of 20 items of general well being like any significant medical history, allergy or adverse reaction to drug etc.

3. SFQ (sexual function questionnaire) and
4. FSDS (Female sexual distress scale)

Sexual Dysfunction Questionnaire

It is self-administered 19 items scale. It is brief i.e. require approximately 5 minutes to administer. It is also suitable for use in both clinical as well as research settings.It has good validity and test retest reliability. Apart from helping in diagnosis, it can also detect treatment induced changes [22].

Sexual Activity Questionnaire Function Scale (SAQ-F)

It is brief questionnaire consisting of 10 items. All except one have 4-graded categorical scale.It takes 5–10 minutes to fill out[23].

Sexual Arousal and Desire Inventory (SADI)

It is a scale to assess arousal and desire in both men and women. It is a Likert based scale rated on 6 points. It takes about 10 minutes to fill out. It can also be used irrespective of sexual orientation or relationship status [24].

ASSESSMENT TOOLS FOR SEXUAL DYSFUNCTION IN DEPRESSED PATIENTS

As there are high incidence of treatment-emergent sexual dysfunction, it is important to establish a baseline of dysfunction using a valid and reliable rating scale before assessing the impact of pharmacotherapy on sexual function [25,26]. A review of 79 randomized controlled trials revealed that 75% patients spontaneously report sexual side-effects, while only 8% report after using specific instruments [27]. Of the studies using specific sexual function scales, most of them were clinician administered, while nonspecific adverse event check lists were used in only 18% of trials. Several validated measures of sexual dysfunction are available for clinical use in depressed populations.

Arizona Sexual Experiences Scale

The Arizona Sexual Experiences Scale (ASEX) is a brief self-report scale for assessment of pharmacologically induced sexual dysfunction in the patients of major depression [28]. Five global aspects of sexual dysfunction i.e.drive, arousal, penile erection /vaginal lubrication, ability to achieve orgasm,and satisfaction with orgasm are measured by this scale. The distinction between sexually active vs. non-active participants poses an important question on scale validation that has not been addressed yet. High internal consistency and test–retest reliability are the qualities of ASEX. It also has good validity, sensitivity and specificity [28]. The ASEX has been used in many clinical trials and also validated in patients with schizophrenia [29] and end-stage renal disease [30]. While the ASEX is a useful clinical tool, the assessment of each domain does not provide details of the various facets of sexual dysfunction in that area.

Changes in Sexual Functioning Questionnaire

This scale comprises 36 items for males and 35 items for females [31,32]. This scale addresses five dimensions: pleasure, desire/frequency, desire/interest,arousal, and orgasm. All of the scales, shows moderate to high internal consistency (α=0.64–0.75)except for orgasm in men. This scale has good concurrent validity and ability to distinguish between depressed and nondepressed samples [32].The abbreviated version of this scale has 14 items and asses three domains of sexual response corresponding to desire, arousal, and orgasm. This scale requires 5 to 10 minutes for administration [24].

Psychotropic-Related Sexual Dysfunction Questionnaire

The Psychotropic-Related Sexual Dysfunction Questionnaire contain 7 items and require 5 minutes for administration [33]. The first two items address spontaneous report and physician inquiry about sexual dysfunction. The next four items assess desire, arousal, and ejaculation/orgasm,while the final item assesses the degree of tolerability of any change in functioning. This scale has high internal consistency and reliability. This scale had a high correlation with clinical global impressions of sexual functioning (r=0.79) and moderate correlations with the Hamilton Rating Scale for Depression (r=0.63) [34]. This scale has high sensitivity. Although this is a brief scale, yet it does not capture specific elements of sexual dysfunction.

Sex Effects Scale

This scale has been used to compare sexual side effects of different antidepressants. It is a self-report or interview-based tool for both male and female. This scale assesses changes in three domains: desire, arousal, and orgasm. Two additional items evaluate global satisfaction with sexual function. The scale showed high validity, reliability, internal consistency and inter-rater reliability. It is particularly valuable for assessing side-effects related to medication. However, it lacks the questions to address psychologically induced symptom, therefore its role in measuring the effectiveness of sexual dysfunction therapies would be limited [35].

CONCLUSION

Various assessment tools exist to describe sexual dysfunction in females. Clinicians and researchers are encouraged to select one or two instruments that meet their needs according to individual patient and use them consistently for the assessment of sexual dysfunction in females. Current research is being done to make assessment tools easier to apply, more objective and quantitative.

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