female sexual interest/arousal disorder

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- Ahmad 42y/o engeneer
- Saeedeh 39y/o lawyer
- No child
- Married 13years
- No sexual intercourse for 10 years
- CC. Desire :low ,Both male and female
- Marital conflict: High, mostly from spouse family
- Poor communication
- anger

Definition (DSM-5):

- **female sexual interest/arousal disorder** (FSIAD) is characterized by a lack of, or significantly reduced, sexual interest and/or arousal, as manifested by at **least three of the following symptoms**
- **(criterion A):** (1) **absent/ reduced interest in sexual activity; (2) absent/reduced sexual/erotic thoughts or fantasies; (3) no/reduced initiation of sexual activity, and typically unreceptive to a partner's attempts to initiate; (4) absent/reduced sexual excitement/pleasure during sexual activity in almost all or all sexual encounters; (5) absent/reduced sexual interest/arousal in response to any internal or external sexual/erotic cues (e.g., written, verbal, visual); and (6) absent/reduced genital or nongenital sensations during sexual activity in almost all or all sexual encounters.**
- For a diagnosis to be given, the symptoms must be present for a **minimum duration of approximately 6 months (criterion B),**
- and they must cause clinically **significant distress in the individual**(**criterion C**).

- Furthermore, in order to classify the complaints under this diagnosis, the complaints should not be better explained by a **nonsexual mental disorder, severe relationship distress, or other significant stressors.**
- Also, they must not be exclusively associated with the consequences of a medical condition, and when substance or medication use can explain the complaints, the diagnosis of substance/ medication-induced sexual dysfunction should be made.
- **The presence of another sexual dysfunction does not rule out a diagnosis of FSIAD because it is common that women experience more than one sexual dysfunction concurrently**. For example, a sexual pain disorder may go along with a lack of sexual interest and arousal.

Prevalence/Incidence

- Little or no sexual desire is the **most common** sexual problem reported by women.
- the prevalence of low sexual desire in the general population of women was consistently found to be about **20–30%.**
- When distress about the low desire was used as a necessary criterion for dysfunction, the prevalence rates decreased by about half. The prevalence of sexual arousal problems across studies was between **11–31%,** but in combination with the criterion of distress, these rates also decreased sharply.

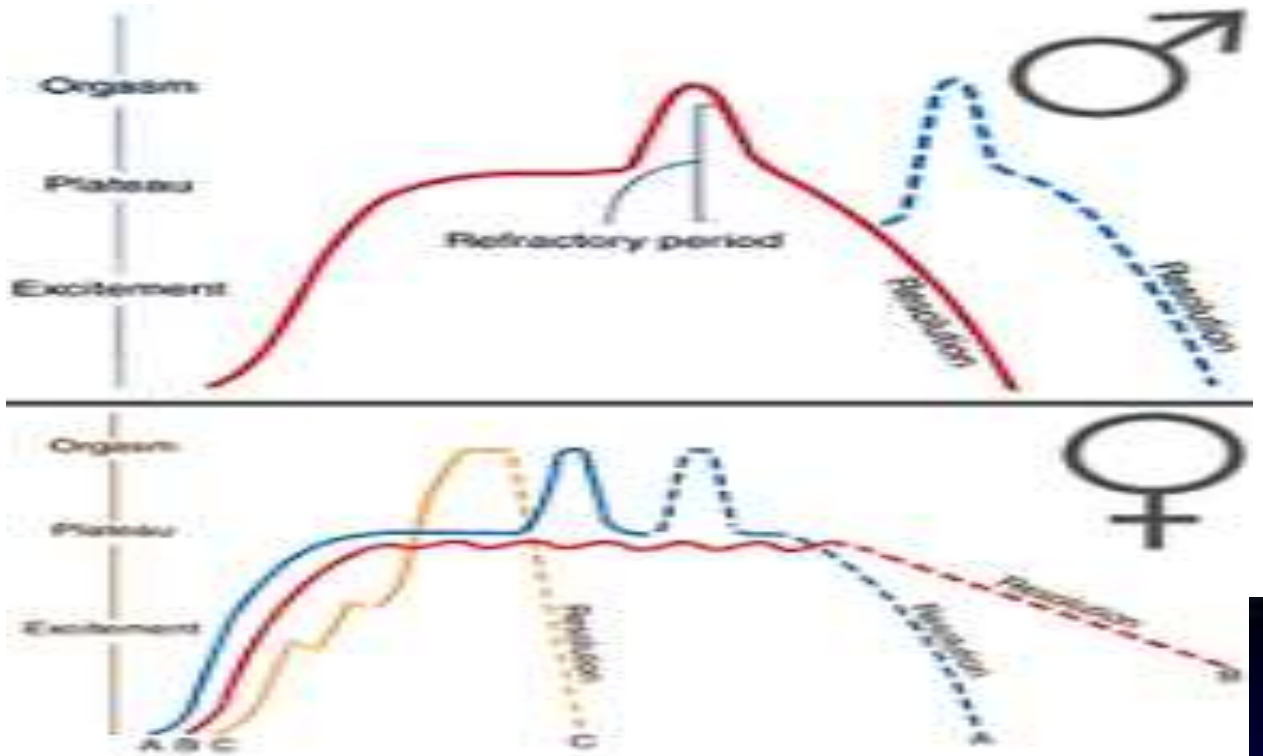
Etiology

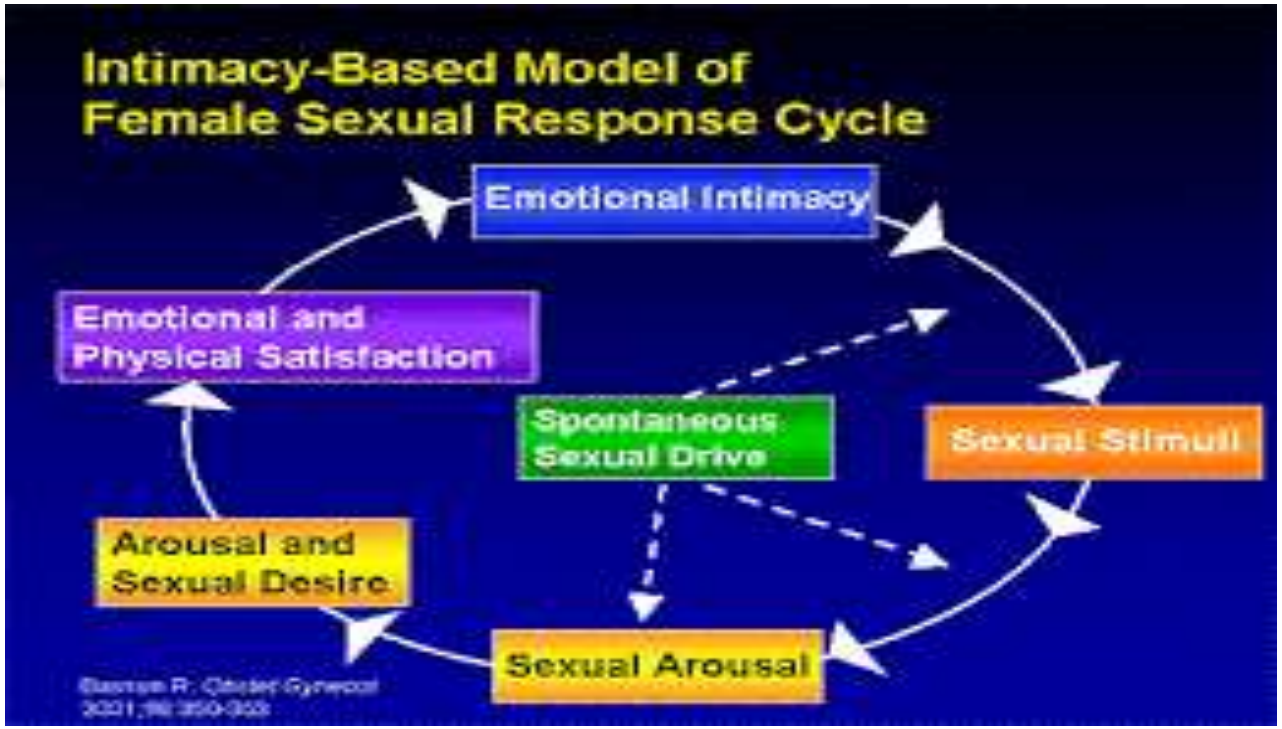
- Models of female sexual arousal and desire

- The DSM-IV-TR classification of sexual disorders was based on a **linear model of sexual response**, in which the phase of **sexual desire precedes the phases of sexual arousal, orgasm, and resolution** (Kaplan, 1977; Masters & Johnson, 1970).

- This model implies that sexual desire occurs spontaneously and that it is independent of the sexual arousal response.

- Various authors criticized this strict distinction made between the **phase of sexual desire and the phase of sexual arousal**, and emphasized that sexual motivation stems from the processing of sexual stimuli, which leads to sexual arousal as well as sexual desire (Basson, 2001; Both, Everaerd, & Laan, 2007; Everaerd & Laan, 1995).


Orgasm
Plateau
Excitement
Refractory period
Resolution
Orgasm
Plateau
Excitement
Resolution
A B C


Intimacy-Based Model of
Female Sexual Response Cycle
Emotional Intimacy
Emotional and
Physical Satisfaction
Spontaneous
Sexual Drive
Sexual Stimuli
Arousal and
Sexual Desire
Sexual Arousal

- It follows from this notion that sexual desire does not precede arousal, but is a consequence of arousal or a simultaneous occurrence. Sexual motivation is not seen as something that comes from within—as something that one can have a lot or a little of—but as something that manifests itself when certain conditions are met.
- The **conditions necessary to activate the sexual process** have three parts: (1) there must be an intact system that enables sexual responsiveness; (2) stimuli with a sexual meaning must be present that can activate the sexual system; and (3) the circumstances must be suitable to pursue sexual activity (Singer & Toates, 1987).
- Sexual activity is not always a consequence of a process in which sexual arousal and sexual desire are involved. Men and women reported a wide variety of motives, such as experiencing physical pleasure, showing affection, satisfying the partner, relieving boredom, or fulfilling a perceived obligation

- Although the top ten motives of the men and women were closely matched, the men were more inclined towards physical motives, such as seeing an attractive body, whereas the women were more inclined towards relational motives, such as showing love.
- In the female sexual response model developed by Basson (2001), the **need for intimacy** plays an important role as a motive for sexual activity.
- Basson emphasized that, particularly in long-term relationships, a woman's willingness to be sexual derives from her wish for intimacy and that this can lead to sexual arousal and sexual desire.
- The **rewarding value** of the sexual interaction then determines the extent to which the woman will be receptive to sexual stimuli in the future.

Arousability: the role of hormones and somatic disease

- There is agreement in the literature that **sex hormones** (**estrogens and androgens**) play conditional roles in sexual response .
- In addition, it is not clear what critical threshold of sex hormones enables sexual responsiveness and what level represents a deficit.
- The most important hormones for women are the **estrogens**, including **estradiol**.
- During menopause, estrogen levels decrease sharply. **Decreased estradiol levels can cause complaints such as hot flushes, sleep disorders, mood swings, vaginal atrophy, and vaginal dryness.** These symptoms can have negative effects on sexual functioning. There are indications that basic **vaginal blood circulation is poorer in postmenopausal women than in premenopausal women**.
- **Low estrogen levels have been shown to be correlated with poor basic blood circulation, but not with a weaker vaginal engorgement in response to erotic stimulation.**
- **Thus, when there is sufficient erotic stimulation, lower estrogen levels do not necessarily seem to obstruct the genital arousal response.**

- In addition to estrogen, women produce androgens, including **testosterone**.
- In the blood, a maximum of **3%** of the total **testosterone is freely available**, while the rest is strongly bound to **sex hormone binding globulin** (SHBG) and **is not biologically available**.

- The amount of SHBG is related to factors such as the estrogen level in the blood. **High estrogen levels lead to higher SHBG production, which reduces the biologically available testosterone fraction.**
- Physiologically, the testosterone concentration gradually decreases in women starting at the age of 25 to 30 years.

- **Deficiencies in freely available testosterone** can arise due to low testosterone production, as observed in patients with pituitary dysfunction, ovarian dysfunction (e.g., premature ovarian failure, Turner's syndrome, preventive removal of the ovaries in the case of mutation in the BRCA gene, adrenal dysfunction associated with chemotherapy and radiotherapy, hypothyroidism, use of corticosteroids or anti-androgens (e.g., in the Diane contraceptive pill), or due to excessive SHBG under the influence of medication (e.g., estrogens in oral contraceptives).

- **Very few psycho-physiological data are available on the effect of testosterone on the sexual arousal response in women**.
- A small number of studies found that the administration of methyl testosterone increased the genital response, but did not affect subjective sexual arousal .

- In a study on surgically postmenopausal women that measured brain activity in reaction to erotic stimulation, the activity in the **limbic system** was **stronger after they had received estrogens and testosterone than after estrogens alone or no medication .**Subjective sexual arousal was not measured in this study.

- In summary, it can be concluded that **androgens certainly influence the sexual arousability** of women, but as yet, the only clear empirical evidence of a relationship between decreased testosterone levels and low sexual desire is in studies of women with bilateral oophorectomy.

Somatic disease and medical interventions

- Somatic disorders or medical interventions can lead to decreased sexual desire or disruption of the arousal response. In addition to physiological mechanisms, psychological factors related to chronic disease, such as **fatigue, pain, or depression, can affect sexual functioning.**
- Chronic diseases that are known to disrupt sexual functioning physiologically as well as psychologically are neurological disorders such as multiple sclerosis and transverse spinal cord injury ; endocrine disorders such as hypothyroidism, hyper prolactinaemia, and diabetes mellitus.

- Recently, there is increasing attention on the negative effects of **cancer** and cancer treatment on female sexual function .

- Although multiple physical conditions have been associated with impaired *subjective* arousal and desire, currently only women with transverse spinal cord injury , **women with nerve damage as a result of oncological surgery to the uterus, and women with diabetes mellitus have been found to show weaker *genital* arousal responses to sexual stimulation compared with healthy controls.**

- Various drugs that act on the neurotransmitter systems, such as **anti-depressives** (**selective serotonin reuptake inhibitors; SSRIs**) and **antipsychotics** (**dopamine antagonists**), have negative effects on sexual desire and sexual arousal .

- A few **antidepressants seem to have weaker antisexual side-effects** than others (**agomelatine, bupropion, moclobemide, mirtazapine**), and there are indications that the addition of bupropion to pharmacological treatment for depression may be a promising approach to reduce antidepressant-induced sexual dysfunction.

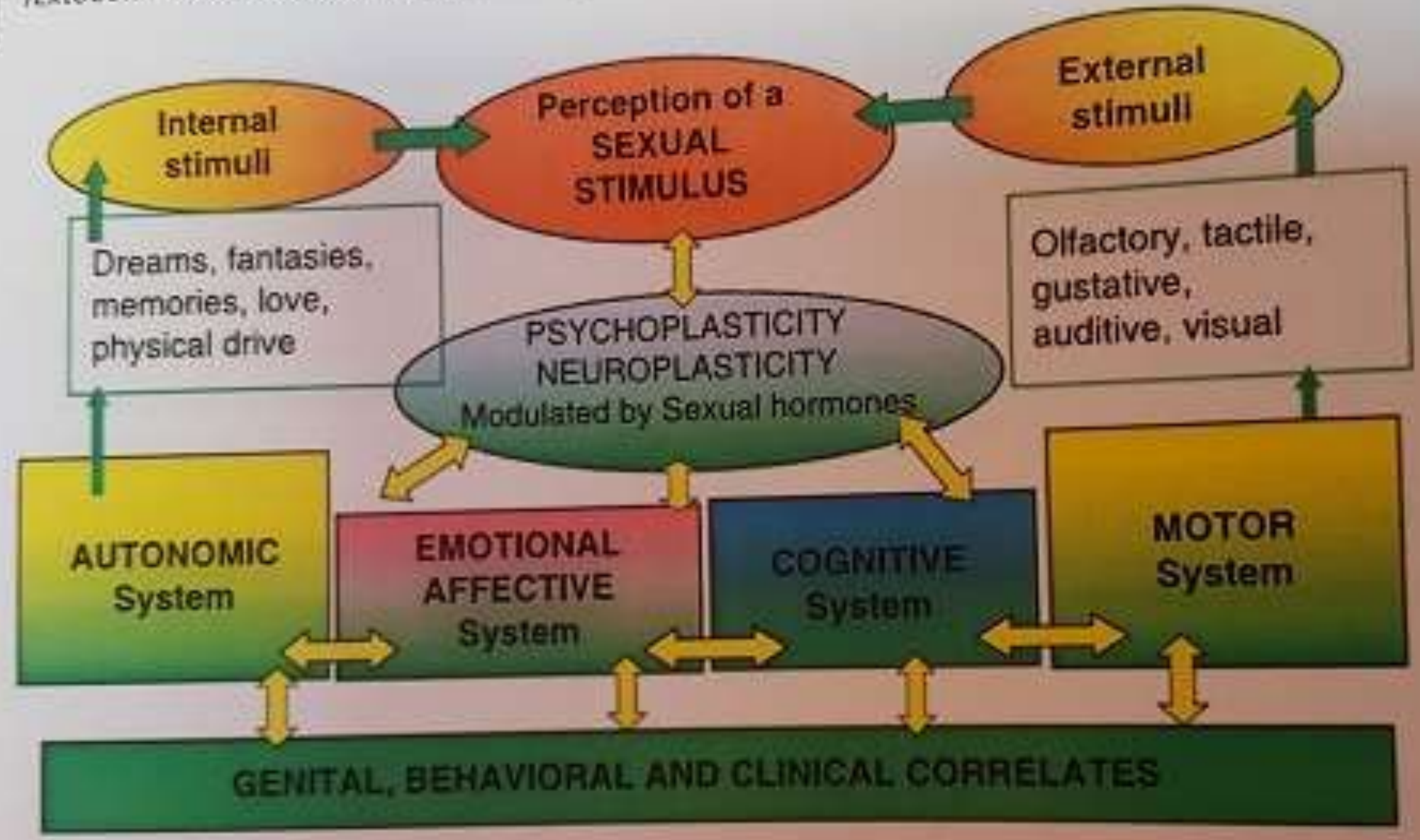
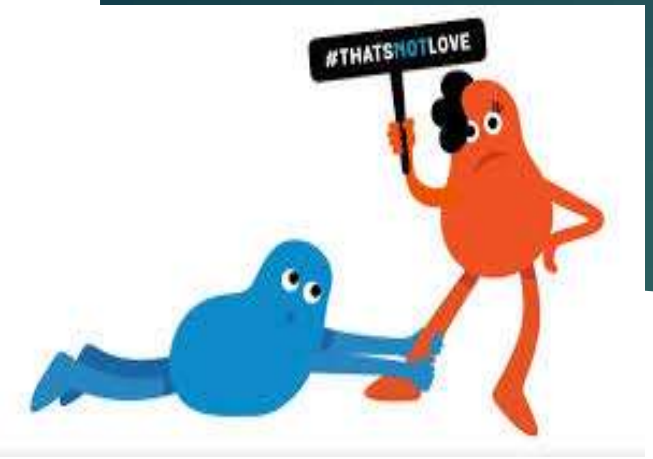


Figure 8.1 Physiology of sexual desire/interest and central arousal. (Adapted from [6].) (*See plate section for color representation of the figure*)

Arousability: psychological factors



Stimuli and meaning

- The **incentive motivation model** emphasizes the importance of the **attractiveness of the stimuli in the origination of sexual arousal and sexual desire.**
- According to the **information processing model**, different cognitive processes can influence how sexual stimuli are interpreted, which can mean **facilitation of the sexual arousal response,** or indeed**, its collapse.**
- women with **sexual arousal problems** reported **fewer positive sexual feelings** and **more negative feelings in response to erotic stimuli** than women without sexual problems .

- Various mechanisms can have a negative influence on the attractiveness of sexual stimuli, such as **habituation** or associations with negative outcomes.
- When a new stimulus was subsequently introduced, **arousal increased again**.
- In this respect, it is interesting that questionnaire research in women showed that a **longer relationship duration** correlated with **diminishing sexual desire** , and that starting a new relationship was accompanied by stronger feelings of desire .
- Also, in qualitative research, women with sexual desire disorder report perceiving the institutionalization of the relationship, **over familiarity with their partner,** and **de-sexualization of the roles in the relationship** as causes of their waning desire .
- It is possible that **habituation and/or a lack of variety** are involved in the origination of decreased sexual desire in longer relationships.

- Sexual stimuli can also lose their attractiveness when sex repeatedly results in **negative outcomes**, such as **anxiety, disappointment, or pain**.
- A more **negative attitude towards sexuality** in general also coincides with more sexual problems .

- For example, the **experience of sexual violence** can lead to strong negative associations with sex. A history of sexual violence can play a role in sexual desire or arousal problems and particularly in **sexual aversion**.
- **Negative opinions and attitudes regarding sex that originated during sexual development can also influence sexual functioning**.

Mood and cognitions

- It is well known that **depression** is associated with low sexual interest and sexual response. There is evidence of lower self-esteem and higher rates of mood problems in women with low sexual desire.
- Women with sexual desire disorder and depression or anxiety reported poorer sexual function compared with women with sexual desire disorder and no depression, and **antidepressant use was associated with sexual dysfunction** predominantly among women with unresolved symptoms of depression.
- The exact cognitive, affective, or physiological processes through which depression and anxiety influence sexual response are as yet unknown.

- In the model developed by Barlow (1986), **fear of failure** in a sexual situation leads to a focus of attention on negative non-sexual stimuli instead of on sexual stimuli, which **prevents the progress of the arousal response**.

- **Thoughts** related to fear of failure can include thoughts that the **partner will be disappointed** because the woman's arousal response does not occur fast enough, or thoughts that the **partner will perceive the woman's body as unattractive**.

- The degree to which a woman feels physically and sexually attractive is related to **sexual self-confidence** and sexual functioning.

- **Cognitive distraction** during the **processing of sexual stimuli** leads to weaker sexual arousal in women .
- On the basis of their clinical experience with sexual problems, **Masters and Johnson described** that "**spectatoring**" (i.e., **when a person observes and judges him/herself from a third-person perspective during sexual activity**) inhibits the sexual response (Masters & Johnson, 1970).
- Laboratory research showed that, in women without sexual problems, a so-called "**hot focus**" (i.e., the **woman immerses herself as much as possible in the sexual situation and focuses her attention on her emotional and physical reactions**) enhances feelings of sexual arousal .
- In addition, it appears that expectations influence feelings of sexual arousal: Women with and without sexual arousal problems experienced greater sexual arousal when they received **positive feedback about their physical arousal response**.

Relational context

- In women, there is a strong correlation between sexual desire and relational satisfaction.
- It is not possible on the basis of these data to determine whether low desire is a cause or a consequence of relational dissatisfaction, but **particularly in women, sexual desire seems to be sensitive to the interpersonal aspects of the relationship**
- **On days with more positive relational interactions, there was more sexual contact.**
- Thus, **the dynamics in the relationship play an important role in the sexual motivation of women.**

- The way that people **deal with differences in sexual desire** within relationships is also influenced by **norms and values related to sexuality and relationships**.
- Whereas in the past sex was often viewed as a **marital duty**, nowadays it seems to be the norm that both partners have to be willing before there is any sexual contact.
- Interestingly, recent research on sexual desire in long-term relationships shows that individuals who are motivated to meet their partner's sexual needs (high in *sexual communal strength*) experience higher levels of sexual desire.

Assessment of Desire and Arousal Problems in Women


Sexual Pain Disorder
Hypoactive Sexual Desire Disorder (HSDD)
Sexual Arousal Disorder
Orgasmic Disorder

Bio Psycho-Social Model

Initial interview

- Owing to the fact that sexual functioning in women is strongly influenced by the **relational context,** as part of the assessment process, it is of great importance to talk to both the woman and her partner in order to **map the problems** of low desire and arousability; preferably, the couple should be seen together.
- **is the woman avoiding any intimate physical contact because she is afraid that the partner will then expect her to have intercourse that she does not desire?**
- **Is there hardly any time for emotional and physical intimacy due to lack of privacy or overfull agendas? Does the woman feel physically unattractive?**
- In addition, it is important to ask the woman **how she experienced sexual activity in the past** and, if still sexually active, at the present time.

- **To what degree and in what way was or is sex with the partner a positive and rewarding experience and/or a negative and disappointing experience?**
- **Did the woman experience sexual violence in the past, which may have resulted in negative associations with sex?**
- Specific attention should also be paid to relational satisfaction and the woman's feelings for her partner. For example, **does she still find her partner attractive?**
- **Are there any problems in other relational areas that are influencing the woman's feelings for her partner?**

- To what extent now and in the past does/did the woman experience feelings of sexual arousal in sexual situations (e.g., during masturbation, intimate kissing, having her genitals stroked, stroking her partner)?
- To what extent does the woman become lubricated during sexual stimulation?
- Furthermore, there should be evaluation of whether there are feelings or thoughts that seem to stimulate arousal or, in contrast, hinder the process.

- When there are indications that somatic or psychiatric disorders may (partly) form the background of the sexual problems, the woman can be referred for further medical or psychiatric tests.
- Obviously, the health professional must be alert to a possible depressive disorder. When somatic or psychiatric factors are involved, it should be considered whether their treatment needs to take priority.
- **If there are other dominant problems, such as a depressive disorder, post-traumatic stress disorder, or serious relational problems, these should be dealt with first.**
- If the woman is taking medication that can have a negative influence on the sexual response, the treating physician can be contacted to decide whether the medication can be adjusted.

Further diagnostic tools: questionnaires, physical examination , and/or laboratory tests

- Information from the interview can be extended using questionnaires that measure sexual function, psychological problems, and relationship satisfaction. **Suitable questionnaires** are, for example,
- the **Female Sexual Function Index (FSFI)** (Rosen *et al.*, 2000) to measure problems in the domain of sexual desire, arousal, pain, and orgasm;
- the **Golombok Rust Inventory of Sexual Satisfaction (GRISS)** (Rust & Golombok, 1986) to measure sexual dissatisfaction and problems in heterosexual women and men;
- **Symptom Checklist 90-R (SCL-90)** (Derogatis, Lipman, & Covi, 1973) to measure psychological problems and symptoms of psychopathology;
- the **Trauma Screening Questionnaire (TSQ)** (Brewin *et al.*, 2002) for screening for post-traumatic stress symptoms;
- the **Beck Depression Inventory (BDI-II)** (Beck, Steer, & Brown, 1996) for screening for symptoms of depression;
- and the **Maudsley Marital Questionnaire (MMQ)** (Arrindell & Schaap, 1985) to measure relational functioning.

Treatment Options

- In the majority of women that seek help for complaints of low interest/arousal, the problems are not associated with hormonal disorders or specific somatic disorders; the women are mostly physically healthy.
- In these women, sexual interest/arousal problems, therefore, seem chiefly associated with **inadequate erotic stimulation in everyday life or with negative evaluations of the sexual and relational context,** which lead to inhibition of arousal and sexual desire.
- This implies that treatment should mainly be aimed at helping the woman and her partner to **employ (new) sexual stimuli that can lead to arousal, strengthen the rewarding value of sex by promoting pleasant sexual feelings, decrease any negative feelings, and optimize communication and intimacy within the relationship.**

Psychological treatment

- sex therapy and **cognitive-behavioral therapy**.
- It should be noted that very little effectiveness research has been conducted and that, therefore, very little can be said with any certainty about the effectiveness of various techniques and procedures .
- **Effective treatments seem to have a broader approach**, **treat the couple instead of the woman alone,** and **apply techniques that not only focus on sexual interest, but also on improving arousal, orgasm, and sexual satisfaction**.
- In case of sexual arousal problems, often extra attention is given to masturbation exercises, with the aim of teaching the woman and the couple step by step how to achieve adequate erotic stimulation.

- **Classical sex therapy** comprises **sex education**, a **coitus prohibition**, and **subsequently a number of successive sensate focus exercises** (Masters & Johnson, 1970; see also Avery-Clark & Weiner).
- These exercises allow the couple to start from scratch in **building positive sexual experiences.** During the **sensate focus exercises**, the partners take turns caressing each other.
- The active partner tries to give his or her partner **sensory pleasure**, and the **receiving partner tries to relax and to focus on his or her feelings and bodily sensations.**
- **The touching exercises are hierarchically constructed, starting with whole body sensual touching excluding the genitals and breasts, followed by whole body touching including sexual areas.**

- **Additional sex therapy interventions** include **exercises** that **encourage the identification of stimuli** that may elicit sexual feelings; exercises that can help the woman to reach arousal and orgasm, such as masturbation exercises ; and coital techniques that allow for optimal clitoral stimulation .
- **Cognitive restructuring aims at altering thoughts that can block sexual desire and arousal**, for instance cognitions based on :
- **negative self-esteem** ("I am unattractive"; "I am a rubbish partner because I don't feel like having sex"),
- **restrictive cognitions** with regard to intimate physical or sexual initiative ("If I kiss him, it will have to lead to intercourse"),
- and **negative expectations** about one's own sexual response ("I never become turned on quickly enough anyway").
- In addition, attention can be paid to partner-therapeutic interventions to promote positive intimate experiences, to improve communication, to deal with negative emotions, and to negotiate wishes and desires. **Communication exercises** can be more general or specifically aimed at communication about sexuality and Sexual talk.

Pharmacological treatment

- When it is probable that hormone deficiencies are contributing to low sexual interest/arousal (e.g., for women with sudden problems following menopause or medical intervention), psychological treatment can be supported by supplementary hormonal treatment.
- The most common treatment for **typical menopausal complaints** and **vaginal atrophy** is **systemic or local estrogen supplement**; in women whose uterus is intact, this is combined with a progesterone preparation.
- This treatment, **however, can unintentionally lower sexual arousability as exogenous estrogens reduce the biologically available testosterone fraction by increasing SHBG.**

- **Tibolon** (brand name Livial) is a pharmaceutical with estrogenic, progestogenic, as well as androgenic characteristics that is registered for hormone suppletion therapy in postmenopausal women with estrogen deficiency complaints.
- **transdermal form of testosterone** ("the testosterone patch," brand name Intrinsa)
- A **combination of an estrogen and testosterone** seems to have a more positive effect on various aspects of sexual functioning and psychological wellbeing than estrogen therapy alone.
- **Bremelanotide: non-selective melanocortin receptor agonist**

- Recently, after previous denial, the American Food and Drug Administration (FDA) approved **flibanserin** (brand name Addyi) for the treatment of **low sexual desire in premenopausal women.**

- Flibanserin has mixed effects on the serotonergic and dopaminergic neurotransmitter systems, was initially developed as an antidepressant, and was later tested for prosexual effects.

- In a number of large trials including women with the diagnosis of hypoactive sexual desire disorder, it was observed that the use of flibanserin resulted in a significantly larger increase in monthly number of so-called "**satisfying sexual events**" compared with placebo .

- Animal research has shown that the **phosphodiesterase type 5 (PDE-5) inhibitors: sildenafil** (brand names Viagra and Revatio among others) and **vardenafil** (Levitra and Staxyn among others) appear to **increase vaginal and clitoral blood circulation**.
- In women without sexual problems, sildenafil also **increased vaginal engorgement during erotic stimulation**; however, feelings of sexual arousal were not intensified by the drug .
- Sildenafil was found to have positive effects on feelings of sexual arousal and orgasm in a few studies of women with sexual problems , whereas in other, mostly unpublished studies, no effects were observed .
- Studies in **women with physical disorders and one study in women with sexual side-effects from antidepressants showed that sildenafil could have positive effects in specific patient groups.**

- Recently, there have been indications that **on-demand use** of a **combination of testosterone and vardenafil** can have **positive effects on the sexual arousal response** in women with low sensitivity to sexual cues , while **on-demand use** of a combination of **testosterone with a serotonin receptor agonist**—which is thought to decrease sexual inhibition—can have positive effects in women more inclined to sexual inhibition .
- **A major advantage of the on-demand treatment is that it addresses the potential safety concerns of prolonged use of androgens in women.**

Reproductive Health Topics

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