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Review Article

Non-pharmacological interventions for male sexual dysfunctions

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Abstract

Male sexual dysfunctions are common conditions encountered in general as well as special clinics. However, their clinical recognition, proper diagnosis, and management remain delayed due to several factors related to patient and clinician. Currently there are several effective and useful treatment strategies for male sexual dysfunctions. Psychoeducation, couple therapies, mindfulness-based strategies, directed masturbation, Kegel exercise, start-stop technique, squeeze technique and using psychological interventions, and lifestyle intervention are some of the techniques employed to manage male sexual disorders. The evidence base for many non-pharmacological techniques is far from convincing. However, they are often utilized in clinical scenarios empirically.

Keywords:
Male sexual dysfunctions, Psychological interventions, Therapy, Dual sex therapy, Sensate focus

Introduction

Male sexual dysfunctions are commonly seen in clinical practice and the community. However, many patients are often embarrassed and significantly delay seeking medical advice (Bancroft and Janssen, 2000). Men's sexual disorders are classified as disorders of desire, arousal (erectile dysfunction), or orgasm (premature or delayed ejaculation, or anorgasmia) as per the sexual response cycle, though there is considerable overlap and concurrence across these disorder groups (Hatzimouratidis and Hatzichristou, 2007).

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Recent improvements in the understanding of the anatomy, physiology, and pharmacotherapy of Male Sexual Dysfunctions (MSD) have resulted in better outcomes and improved the quality of life in such patients.

Despite this high prevalence, male sexual dysfunctions are often under diagnosed in clinics, and several patient-related and physician-related barriers have been reported to contributing to this situation (Bancroft and Janssen, 2000). For example, individuals are usually hesitant to initiate dialogues about their sexual dysfunctions because of the embarrassment and shame associated with these disorders. Physicians tend not to inquire about MSD due to their limited awareness (Hatzichristouet al., 2016). Treatment decisions in MSD should be based on the physician's assessment of each patient's requirements and an accurate diagnosis. This article provides a classification and management algorithm and is mainly focused on the 'Biopsychosocial' treatment of sexual dysfunctions.

The article has been organised according to the following most important concepts related to the management of MSD.

1. Dual control model
2. Psychoeducation
3. Psychological therapy

a. Couple therapies
b. Mindfulness-based strategies
c. Directed masturbation
d. Kegel exercise
e. Start-stop technique
f. Squeeze technique
g. Mixing with lifestyle intervention

Dual control model

The dual control model of sexual reaction is based on the assumption that an individual's sexual response results from a balance of excitatory and inhibitory processes (Janssen and Bancroft, 2007). It is a theoretical model. A significant number of previous studies have shown that excitatory and inhibitory systems operate somewhat independently of each other. Their sensitivities to the response from various modifiers vary from person to person. The variations in responsiveness for excitatory and inhibitory stimuli can explain the inter individual variability of the sexual responses during the normalcy and in a disease state. The researchers compare it to having both an accelerator (excitation) and a brake pedal (inhibition) in a car. In any given sexual scenario, each person will use one or both pedals to varying degrees, depending on their sexual physiology, history, and personality.

Sexual risk-taking, adultery, sexual aggression, sexual compulsivity, the effects of mood on sexual desire and response, and even sexual happiness and compatibility in couples have all been explained using the Dual Control Model (Janssen and Bancroft, 2007; Bancroft et al., 2009). Understanding and accepting the dual control model can be utilized to manage sexual dysfunctions. The couple and individual can conceptualize their own and partners' sexual exciters and inhibitors, and interventions can be planned so that factors likely to contribute to the sexual dysfunctions can be effectively managed. Incorporating a dual control model in the treatment strategy allows subjects to understand their sexuality more objectively. The therapist can mauver the management strategy as per the actual need of the couple and individual.

The process could be understood broadly as an adaptive pattern where the sexual response is inhibited if it is recognized as distracting and in situations where continuing an activity could be disadvantageous or hamper the person in responding to other salient stimuli. If the situation and stimuli favor the excitatory response, the activities are carried out accordingly. The outcome depends on the process favoured over the other one (Bancroft and Janssen, 2000; Hatzimouratidis and Hatzichristou, 2007). Individuals differ in their predisposition for excitation and inhibition; for example, those with an unusually high propensity for excitation and a low propensity for inhibition are more likely to engage in problematic sexual behaviour, whereas those with a low propensity for sexual excitation and a high propensity for sexual inhibition are more likely to have sexual response impairment. The effects of these stimuli are mediated by psychological and neurophysiological characteristics of the people involved and other factors like genetics and early learning. Sexual arousal is triggered by the interaction of excitatory and inhibitory stimuli. The effects of these stimuli are mediated by psychological and neurophysiological characteristics of the people involved and other factors like genetics and early learning (Hatzichristou et al., 2016).

The non-pharmacological treatments utilised in managing sexual disorders have evolved over a while. Non-pharmacological treatments are offered to individuals according to their needs, relationship status, psychological mindedness, ability to invest time and efforts during the treatment process, and willingness to go through psychological changes needed to implement the treatment. The following treatment strategies are commonly used.

Psychoeducation

Sex education/psychoeducation is the first step in the therapy of any sexual disorder. By providing factual information, sex education should normalise the individual's experiences and lessen anxiety associated with sexual acts (Nyandra and Suryasa, 2018). Even though all areas must be covered, extra attention must be paid to those directly relevant to the patient's problem. The couple/patient may also be given reading material in some circumstances. This aspect of using books in therapy is called bibliotherapy. Sex education and relaxation training will take place across several sessions. In most cases, psychoeducation may be completed in four sessions(Hatzimouratidis and Hatzichristou, 2007; Emanu et al., 2018).

Sexual myths and misconceptions are common and constitute an important cause of sexual dysfunction in several cases. Various factors influence common beliefs and attitudes about sexuality in individual life. Culture, society, peer group, opportunities for sexual information, media, and parental comfort in discussing issues related to sexuality are important factors related to the development of beliefs and attitudes related to sexuality.

Inappropriate sexual beliefs or misconceptions might cause problems in a relationship for some people. People develop expectations for what sex should be like and how they or their partners' should act. Unrealistic or inappropriate expectation brings failure to full fill them. It leads to difficulties in sexual functioning and some cases, may lead to sexual dysfunction. One of the goals of sex education is to assist the individual and his or her partner in changing any sexual beliefs interfering with their enjoyment of sex. Some are equally applicable to men and women, while others are more pertinent to one gender than the other (Emanu et al., 2018). Other components of psychoeducation include imparting basic knowledge about sexual anatomy, physiology, normal sexual response cycle, and stages of sexual intercourse. Discussing important aspects of proper communication of needs and desires between partners and understanding normal variations in frequency and extent of sexual desire also holds an integral part of psychoeducation (Blycker & Potenza, 2018).

Couple therapies

Masters and Johnson pioneered a new form of therapy (Dual Sex Therapy- DST) to treat various sexual dysfunctions based on their experiments and research (LoPiccolo and LoPiccolo, 2012). Couple therapy is more rapid, more group-oriented, and shifts the focus onto both partners in the relationship. It has been reported to be more successful in overcoming sexual dysfunctions than earlier employed forms of therapeutic interventions for sexual dysfunctions. Men often have limited experience with a frame of reference relevant to female sexuality, and they have little understanding of the subjective components of female sexual function. Women frequently lack an understanding of the subjective aspects of male sexual functioning or the intensity of most men's ego involvement with their sexuality.

In dual sex therapy, both partners are first assessed for any medical comorbidity. Individual treatment sessions with a therapist of the same gender follow. Following this therapy session, each couple is separately interrogated by an expert of the opposing gender. Then, all four therapy group members debate the possible causes of the problem and treatment options. For 18 sessions, this technique would be repeated three times a week. Assessment of both individuals separately as well as individually, psychoeducation, and the implementation of specialised treatments are all steps in couple therapy.

Dual Sex Therapy (DST) aims to improve healthy communication between partners related to sexuality, expand the sexual repertoire of the couple, improve awareness related to sexual excitement, reduce judgments, and avoid critical comments on each other performances during sexual acts. The success versus sabotage mindset related to achieving perfect sexual intercourse with mutual orgasm is altered and sex is considered a mutually pleasurable act without any yardstick to measure the success of the act. It helps in improving intimacy, sexual confidence as self and couple.

The following steps are followed during the therapy.

a. Non genital and genital sensate focus- The aim of this part of therapy is to focus on sensuality rather than sexuality. The partners caress each other by turn hence both partner plays active and passive roles respectively. Touch using hand and other body parts including oral stimulation (involving lips, teeth and tongue) is encouraged. Additional materials like cloths, feathers, scented candles, special pillows etc can be used to enhance pleasure and as an add on to the enhancement of sexual stimulation. This allows exploration of partners body and experiencing feeling during active and passive roles during the therapy. This stage helps in increasing familiarity with each other's body, to experiment with different types of touch and own sensations during sexual excitement. The strategy is done for non-genital areas first followed by inclusion of genital areas after several session. Sexual intercourse is banned during these stages. This allows partners to get rid of performance anxiety as pressure of the performance is taken away. Partners are encouraged to give verbal and non-verbal feedback on touching. It includes guiding hands of the partners, providing cues related to preferred sites, amount of pressure and type of touch etc. The subjects are encouraged to improve communication and comfort level with each other for interaction in sexual area. During genital sensate focus, focus is not on orgasm. However, if one partner becomes excessively excited, they are advised to masturbate for completion of sexual activity.

Therapist evaluates the activities performed at home in subsequent sessions. Any issues arising out of the sessions are discussed. Practical advises to solve day to day problems is provided. Partners are encouraged for continuation of sessions and to follow the guidelines of therapy including ban on intercourse for successful outcome. Sensate focus sessions in home should not be hurried and enough time should be given to complete the prescribed activities comfortably.

b. Penetrative sensate focus/Containment- The couple needs to continue previous activities as suggested earlier. Now, penetration of penis inside vagina is allowed without movement. The aim is to experience vaginal containment by both the partners in relaxed state. This stage is started once the male partner is having erections and female partner is having vaginal lubrication. Usually female on the top position is preferred so that female partner can adjust depth of penetration, pressure and angle of penetration as per comfort of both the partners.

c. Completion- The last stage of the therapy involves vaginal containment with movements, genital thrusting and rotating and completion of sexual intercourse. The couple is encouraged to experiment with different positions and experience sensations with movement. The aim is to make sex a pleasurable experience for both the partners without any pressure of performance.

Mindfulness

Mindfulness-based approaches have been developed and proved to be effective in reducing stress, treating pain-related disorders, decreasing depression, and encouraging abstinence or other beneficial outcomes in addictions. In the treatment of addictions, mindfulness-based relapse prevention techniques such as urge surfing and SOBER (stop, observe, breath focus, expand awareness, and respond consciously) breathing meditation may reduce sensitivity to triggers, cravings, and negative affect (Vilarinho, 2017).

The organizing principles of the MMSH (Mindful Model of Sexual Health) include the following:

- Respect based sexuality- Respects all people's rights to use their bodies as a safe place to enjoy their individual sexuality.
- Safety- There is no tolerance for anyone being exploited, used or abused for others to experience sexual gratification.
- Connection which is mindful- This technique necessitates an interest in one's inner self, as

well as an openness and curiosity for self-discovery. Pleasure and satisfaction are enhanced by the development of sexual intelligence and sexual empathy.

- Holism- It is a concept that encompasses everything. Sexual, mental, and physical well-being are all linked.
- Mind-body- spirit integration, including eastern and western viewpoints related to mindfulness

The MMSH has eight interconnected well-being domains. Physical health, sexual-emotional health, individuation, intimacy, communication, self-awareness, spirituality, and mindfulness are all proposed to be assessed and integrated as part of health and balance. Within each of these areas, there are features of healthy expression and balance, potential barriers to health and balance, potential consequences, dangers, or harms associated with these barriers, and suitable starting places for attentive inquiries for intrapersonal explorations (Blycker and Potenza, 2018).

In a 2019 study conducted by Leavitt et al., it was found that mindfulness during sexual situations has a positive effect on the sexual satisfaction, sexual well being and improved the self- esteem (Janssen and Bancroft, 2007). In another study conducted by Bossio et al. in men with situational erectile dysfunction, it was found that four week program including psychoeducation and mindfulness meditation led to significant improvement in sexual functioning (Bancroft et al., 2009). Other study by Kimmes et al. have also shown the benefit of mindfulness in anxiety mediated sexual dysfunctions (Nyandra and Suryasa, 2018). Thus there is some positive role of practicing mindfulness for improved sexual functioning in men with penile erection difficulties. Further studies on this subject would give us enhanced insight into the neurophysiological role of mindfulness in sexual dysfunction.

Directed masturbation

In the early 1970s, directed masturbation, a behavioural treatment for female orgasmic dysfunction, was discovered. Directed masturbation, like most sex therapy methods, is based on the sex therapy model developed by Masters and Johnson. Their ground-breaking laboratory work from 1966 shown that men and women are equally capable of sexual response. Furthermore, their work in the field of sexual dysfunction treatment, which was published in the book 'Human Sexual Inadequacy' (1970), shown that people with sexual dysfunctions might improve significantly from a brief and directive treatment. The notion that women should be able to experience sexual pleasure and orgasm in the same way that men did in the 1960s was sparked by the more liberal sexual milieu and growing freedom of women, as well as the work of Masters and Johnson. Directed masturbation is a program of sex-positive education with exercises involving self-exploration and self-pleasuring, followed by partner activities. Research has shown that 60-90% of women with primary anorgasmia using directed masturbation exercises were able to experience orgasm during masturbation (Kohlenberg, 1974). Although the concept of directed masturbation is more widely used for female orgasmic dysfunctions but the method of directed masturbation could also be beneficial for men particularly single men suffering from erectile dysfunction and/ or premature ejaculation where this concept could be incorporated in homework assignment along with other modalities (Kandeel et al., 2001).

Kegel exercise

Arnold Kegel initially described Kegel exercises for pelvic floor muscle strengthening in 1948. Kegel exercises helps to prevent cystocele, rectocele, and urinary stress incontinence, and can be used in managing erectile dysfunction and premature ejaculation. Pelvic floor muscles are a network of muscles that support the urinary bladder and help to control the urine flow. The pelvic muscles are divided into three groups:

1. The bladder- The bladder is a muscle that holds urine and is formed like a balloon.

2. Muscles of the sphincter- These muscles assist in the opening and closing of urethra, which is the duct that drains urine from the bladder.

3. The pelvic floor muscle [also known as the pubococcygeus or PC muscle]- It helps manage the urine flow by supporting the bladder and rectum (Huang and Chang, 2020).

According to a study, if the training programmes last more than three months, the treatment may be successful. Cavkaytar et al, 2015 suggested that the pelvic muscles be strengthened for at least eight weeks (Cavkaytar et al., 2015). After only a week of Kegel exercises, Messe et al. discovered that normal females had a significant increase in sexual arousal (Messé and Geer, 1985). Healthy subjects who did Kegel exercises had enhanced pubococcygeal muscles strength and improved sexual function (Mokhtar et al., 2013). Kegel exercises increased the orgasmic, arousal, and satisfaction domains of the Female Sexual Functioning Index in postmenopausal women, according to research conducted in Iran (Nazarpour, 2017).

Start stop technique

The 'start-stop' technique was developed by Semans. Sexual intercourse begins and progresses to a point near orgasm/ejaculation in this technique, which is sometimes referred to as 'edging'. All sexual stimulation is halted until the sensation subsides, at which point sexual intercourse may resume. The 'squeeze' or 'stop-squeeze' approach, first advocated by Masters and Johnson, is another technique described. Intercourse progresses to the point of near orgasm/ejaculation in this approach. The penis is extracted from the vagina and the glans of the penis is compressed at this moment. Masturbation before planned intercourse is another typical practise employed by younger boys to delay ejaculation. As the age-related refractory period, the recovery interval following ejaculation during which it is physiologically impossible to have subsequent orgasms, increases, this strategy may become increasingly difficult to apply (Martin et al., 2017).

In the treatment of PE, certain therapy techniques can be partially beneficial. Behavioral or psychological therapy, on the other hand, is often not sufficient to completely manage and treat PE. Despite a high short-term success rate of up to 65 percent, long-term success appears to be quite low, with just 25 percent of patients properly managed (deCarufeland Trudel, 2006). It's also worth noting that later research have found it impossible to replicate and validate the reported success percentages. Psychosexual behavioural treatment has a number of drawbacks as well. To begin with, the treatment's efficacy is unknown, and it may or may not be effective in treating specific people. Furthermore, for the therapy to be effective, it must be given time and frequent practise. This time commitment, as well as the need for several sessions with an expert, may be prohibitive to the patient's utilisation of this therapy option. Finally, several of the strategies include the participation of a spouse in the management process, which can be problematic if the partner is unwilling or unable to devote the necessary time (Martin et al., 2017; de Carufeland Trudel, 2006).

Squeeze technique

The squeeze technique for premature ejaculation works by manually stopping ejaculate from exiting the penis by applying pressure to the penis. It is possible to seal off the urethra just enough to prevent ejaculation and lengthen intercourse by temporarily stopping sex and squeezing the penis at precisely the appropriate time (before point of no return) and in the correct spot (Abdel-Hamid et al., 2001).

Mixing with life style intervention

While it's difficult to prove causation, multiple studies have found strong links between ED and lifestyle disorders such as cardiovascular disease, obesity, diabetes, hypertension, and smoking (Pollandet al., 2018). Endothelial dysfunction appears to be the common connection between these clinical entities, which emerges as ED prior to the start of symptomatic Cardiovascular Disease due to the reduced size of the penile arteries. Obesity, diabetes, hypertension, and smoking, which are all risk factors for CVD, also increase the likelihood of ED by causing persistent low-grade inflammation, which leads to endothelial dysfunction (Corona et al., 2013).

Obesity, diabetes, hypertension, smoking, and psychological factors have all been demonstrated to improve or be linked to improved erectile performance. The linkages between ED and lifestyle illnesses provide a valuable area for healthcare providers to investigate in terms of ED management. Lifestyle changes and a multimodal approach that includes psychosocial aspects are key interventions that can help people with ED, and they should be among the first-line recommendations for ED treatment.

Barriers to non-pharmacological interventions in male sexual dysfunctions

There are several barriers to utilizing non-pharmacological interventions to manage male sexual dysfunction. Sexual medicine has not received due importance during the training and teaching of medical students. Hence, the therapist's expertise in delivering interventions in India varies widely. The expertise depends on the individual therapist's motivation and learning opportunities.

There are several barriers to utilizing non-pharmacological interventions to manage male sexual dysfunction. Doctors themselves tend not to enquire about sexual problems owing to perceived lack of expertise, lack of time, stigma, and hesitation. Sexual medicine has not received due importance during the training and teaching of medical students. Hence, the number of therapists is limited, and the therapist's expertise in delivering interventions in India also varies widely. The expertise depends on the individual therapist's motivation and learning opportunities (Avasthi, 2020).

Sex is still considered a taboo subject among the general population, and people hesitate to seek help or talk to their doctors about sexual health. Due to inadequate promotion of sexual medicine and advertising of alternative medicine practitioners in India, many patients seek initial help from traditional practitioners, quacks, and unqualified self-proclaimed sexual medicine experts. Many such practitioners are known to engage in unethical practices, propagating myths and misconceptions and advocating for the discouragement of consultations from practitioners in modern medicine.

Conclusion

Male sexual disorders are prevalent and treatable clinical conditions. The disorders are classified according to the respective dysfunctions as per the sexual response cycle. Several different non-pharmacological treatment strategies are available for MSD. Although, the evidence base for the non-pharmacological treatment strategies is still not adequate, they are frequently used in clinical practice. The interventions are often acceptable and empirically useful.

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