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ORIGINAL ARTICLE

Etiological factors in female Hypoactive Sexual Desire Disorder☆

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Summary
Object. — The purpose of this article is to propose a model to clinicians designed to highlight the dysfunctional elements responsible for the appearance and continuation of Hypoactive Sexual Desire Disorder.
Methodology. — Supported by a broad analysis of clinical and empirical accounts, we suggest a global vision whose theoretical foundations come from ''sexofonctionnelle''.
Results. — This model underlines the multi-factor aspect of Hypoactive Sexual Desire Disorder and leads us to a didactical structuration comprising five axes.
Discussion. — Thereby, the cognitive, physiological, behavioural, emotional and environmental factors are discussed.
Conclusion. — This etiology with its five axes will facilitate the assessment of all the elements responsible for Hypoactive Sexual Desire Disorder and will enable clinicians to adapt their treatment by being aware of the multi-factor nature of Hypoactive Sexual Desire Disorder when taking a medical history.

Introduction

The multi-factor origin of sexual dysfunctions, especially in Hypoactive Sexual Desire Disorder (HSDD), is widely recognised. However, the literature on this subject does not offer a global view of these factors, which are nevertheless concomitant. Supported by a broad analysis of clinical and empirical accounts, we put forward a comprehensive global model whose theoretical foundations come from sexual functionality. This model suggests that individual sexual functioning is based on five axes, namely cognitive, physiological, behavioural, emotional and environmental factors.

Cognitive factors

The impact of cognitions on behaviours is well known in psychology. In sexology, it is equally relevant to believe

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that the way of ''thinking about' sexuality influences the way of ''doing' it (Andersen and Cyranowski, 1994; Baker, 1993; Barlow, 1986; McCarthy, 1989, 1992; Nobre and Pinto-Gouveia, 2006a; Sbrocco and Barlow, 1996).

Negative anticipation of the sexual act

Two attitudes can be observed in most partners of women with HSDD: either they abandon all sexual attempts or they continue to insist on having sexual relations. In this case, women feel under pressure and, the greater the pressure, the less desire they feel. Making love becomes a duty that women tolerate to avoid the opprobrium of their partners. From then on, any desire to do this kind of burdensome activity ends up disappearing. We should note that this pressure sometimes comes from women themselves. Sexuality is felt as an obligation even if their partner is patient and tolerant. They anticipate, sometimes several days ahead, the obligation to make love and develop extremely negative cognitions about the sexuality in prospect. In a study by Trudel et al. (2001), 67.6% of their clinical sample displayed negative anticipation of sexual relations and the negative reactions of their partner.

Impact of lack of knowledge and erroneous knowledge on sexuality

Despite sexual education becoming increasingly common in the West, we must admit that there are still many people who have little objective knowledge of sexuality (Renard et al., 2003). In addition, there is inappropriate knowledge such as ''women are less focused on sex than men; after the menopause women no longer like sex; Sexual Desire (SD) should arise spontaneously; when you are in love, you have SD''. Women with HSDD frequently lack information on sexuality and have a series of sexually dysfunctional prejudices.

Influence of social norms

Sexuality receives wide media coverage. This omnipresence, both implicit and explicit, is stimulating and increases SD for some women, but has a repellent effect on others. There is frequent emphasis on the idea of high performance sexuality, which may indirectly block sexual fulfilment. Even if most people realise that images in the media are only rarely a true reflection of reality, there is still an impact on their sexual functioning (Baker, 2005). Beck (1988) demonstrates that an idea of perfectionism in sexuality may be the origin of performance anxiety, which can cause behaviours to avoid sexual relations. In parallel with this focus on sexual performance, the concept of ''marital duty'' is also still evident in certain people. As Bensussan (2009) shows, there remains real ambiguity, which stems from the fact that for a long time, ''marital duty'' was an integral part of the marriage contract. In this sense, a study carried out by Stuart et al. (1987) makes clear that a majority of women with HSDD consider sexuality as a ''marital obligation''. Moreover, studies have shown that the average frequency of sexual relations is twice per week (Spira et al., 1993; Bajos et al., 2008; Nicolosi et al., 2006). The belief that you 'must make love a certain number of times per week and with a certain level of performance' often causes the paradoxical effect of reducing desire. All human activity, which is considered as a constraint quickly, becomes disagreeable. The same goes for sexual practice. This relates to the perception of a social norm experienced by women (namely: it is right to make love regularly and appropriately). If the perception is that of a duty to adjust to a social constraint, there is a risk that SD will be negatively affected.

Parasitic thoughts

A great many parasitic thoughts can clutter up the minds of men and women and prevent them from functioning normally. This type of thought may arise before sexual activity and take the form of intrusive questions such as ''Will I have desire if my partner makes advances? Will he be angry if I say no?'' This kind of questioning ruins the functional arousal of SD right from the outset. Other parasitic thoughts such as ''I must get up early tomorrow; the children might hear us'' interfere with the first moments of sexual intimacy. These cognitive intrusions cut the surge of desire, which can disrupt sexual stimuli and therefore prevent the arousal of SD, an increase in arousal or even orgasm (Arnett et al., 1986). One study (Prause et al., 2008) has shown that the degree of attention to capture sexual stimuli is a significant predictive factor of the level of SD of the subject. In other words, an individual distracted by parasitic thoughts will have great difficulty in concentrating on sexual stimuli, which encourage SD.

Negative perception of body image

Weaver and Byers (2006) demonstrated that women's sexual problems are more closely linked to the idea they have of their bodily appearance than to their real body mass index. This can be explained by the fact that feminine SD is (in part) narcissistic. Many women become sexually aroused by finding themselves desirable to their partner. It is therefore more difficult for a woman who does not consider herself attractive to understand that another person could find her desirable (Wiederman and Hurst, 1997). Trudel et al. (2001) record that 44.6% of negative cognitions of women with HSDD in their sample relate to physical appearance and self-image. In the study done by Ackard et al. (2000), the women who were most satisfied with their body image were those who made love most often. Trapnell et al. (1997) were able to show that the individuals who are most confident in their physical appearance are more likely to initiate or respond positively to socio-sexual opportunities. Finally, in a study carried out by Berman et al. (2003), positive perception of their sex in women correlates positively with the level of SD.

Depressive thoughts

Correlations have been clearly established between HSDD and depressive thoughts. In Gitlin's sample (1995), 70% of depressed individuals have HSDD. However, it is difficult to know if it is always depression which affects SD or whether

it is the other way round as the lack of SD and the little sexual satisfaction often associated with it, together with the marital tension that this creates, could well contribute to the development of depressive thoughts. A positive correlation exists between enthusiasm, happiness, well-being and SD (De Sutter, 2009) whilst pessimistic thoughts and a negative view of life are contributory factors in making HSDD worse.

Non-permissive thoughts

For many women, including those who are agnostic or not very religious, sexuality is still considered as something bad, negative or dirty. When, in spite of everything, such women have thoughts of a sexual nature, they repress them systematically. Sexual thoughts are considered to be ''inappropriate'' and are rejected (Pasini, 2002). Such inhibition of spontaneous or inferred thoughts contributes to a decrease in SD (Trudel et al., 2003).

Deficient perception of physiological reactions

Laan et al. (1995) showed that the majority of women who viewed pornographic films lubricated, but if they were asked about their cognitions during the film, they generally said that they had not been aroused by the film. This indicates that although their body had reacted physiologically to sexually explicit images, their brain had not registered (or wanted to register) physiological reactions of arousal. While women do not always register the signs of sexual arousal, they have even more difficulty in recognising the more subtle physiological signs of SD. On the other hand, it would seem that, in women who feel SD, the brain can more easily decode physiological information and decide if it relates to a sexual situation (Chatton et al., 2005).

Absence or infrequent usage of erotic thoughts

Sexual fantasies, or in other terms mental representations of a sexual nature, are also one of the different cognitive factors, which can have a powerful effect on sexuality, both positive and negative (Hubin et al., 2008). Various authors (Hubin et al., submitted; Nutter and Condron, 1983; Wilson and Lang, 1981) have established a positive correlation between the frequency of usage of fantasies and female SD. These studies show that women who make frequent use of their fantasies have a higher level of SD than women who do so rarely. The fact of being able to fantasise and develop a sophisticated erotic imagination can contribute to stimulating sexuality and especially the phases of SD, arousal and achieving orgasm. Creating sexual fantasies enables an individual to auto-eroticise mentally, thus avoiding the weariness that couples experience after a certain time and to maintain arousal when the sexual cycles of both partners are in different rhythms.

Physiological factors

The physiological factors listed below should not be taken in isolation. The multi-factor nature of HSDD causes multiple effects. Even if the origin of HSDD is physiological, consequences for cognitions, emotions, behaviours and the environment may be observed. Conversely, even if the individual from the outset has no physiological anomalies, the absence of a sexual life for a lengthy period may cause physiological changes, which will make matters worse.

Neurological impacts

Although the role of the brain in integrating sensoriality, attention and motivation is widely recognised (McKenna, 2002; Meston and Frohlich, 2000; Rowland, 2006), the specific methods of activation of the brain and the sexual response, particularly in women, are still not clearly understood today (Arnow et al., 2009). The cerebral cortex and the limbic and endocrine systems play an important role in the functioning of SD (Rauch et al., 1999) which is adjusted on one hand by the interaction between an arousal centre sensitive to dopamine and an inhibition centre sensitive to serotonin and, on the other, by the brain. (Pfaus, 2009). Consequently, any neurological lesion such as damage to the spinal column or cranial trauma may have an impact on female SD. Neurological diseases such as Parkinson's disease or multiple sclerosis may also affect SD. Finally, chronic diseases affecting overall physiological functioning such as thyroid problems or diabetes may also have a harmful neurological effect on SD.

Hormonal impacts (hypotestosteronemia, hyperprolactinemia, hypothyroidism)

The hormones and neurotransmitters present in the brain influence SD. Oestrogens make the pelvic tissue more elastic, trigger the sensory organs receiving external sexual stimuli and improve the sense of perception of touch, the sensation of vibration and clitoral sensitivity. Oestrogens also interact positively with dopamine, which has a major impact on sexual behaviour and motivation. As far as androgens are concerned, these play a major role in activating and maintaining SD (Kingsberg et al., 2008). The positive effect of testosterone on SD has, of course, been the subject of numerous studies (e.g. Panay et al., 2010; Tuiten et al., 2000). Another hormone, prolactin, produces the opposite effect and may inhibit SD if it is present in too great a quantity in the body. The balance of these different hormones may be disrupted in many different diseases or following surgery. This can also happen as a result of 'natural' physiological developments in women such as the menopause or pregnancy.

Surgical impacts

Certain surgical procedures may have a mechanical or neurological effect on sexual function in general and SD in particular. Hysterectomy has been widely studied although the possible decrease in SD cannot simply be explained by the ablation of the uterus. It is likely that the role this organ can play in SD is linked to it being a symbol of femininity, maternity, health and youth. Loss of the uterus and of reproductive potential may disrupt the sexual activity of certain

women. The negative effect of hysterectomy on body image and female sexual identity sometimes becomes a source of anxiety and depression for certain women (Yazbeck, 2004). Hysterectomy with ovariectomy is only one of many examples of surgical procedures on glandular systems with hormonal secretions. Whilst other surgical procedures do not have a direct physiological effect on SD, there is a significant psychological impact. This is particularly the case for all procedures, which affect women's body image such as mastectomy, amputation and facial surgery.

Impacts of physical or mental illness

Conceptually, SD requires a certain kind of vitality. An illness of whatever kind may therefore indirectly reduce the amount of energy necessary for the expression of SD. Moreover, incapacitating diseases (arthritis, multiple sclerosis etc.), illnesses which affect body image (dermatological problems, prolapse etc.) or which induce severe fatigue (sleep apnea syndrome, narcolepsy etc.) all have a negative effect on SD. Mental illnesses may either cause hyperactive SD (for example the manic phase of manic depression), or inhibit SD partly or completely. This is particularly the case with depression and anxiety problems, which are often associated with HSDD (e.g. Johannes et al., 2009; Laurent and Simons, 2009). Moreover, the direct and indirect effects of chronic disease on sexual health are frequent and complex (Basson et al., 2010). Gynaecological cancer also affects sexual response (e.g. Fobair and Spiegel, 2009; Karabulut and Erci, 2009). According to Andersen et al. (1989), 90% of patients with cancer affecting the genital areas have a sexual dysfunction as a comorbidity.

Iatrogenic impacts (anti-depressants, anti-androgens, prolactin stimulants)

The existence of HSDD may be due to taking drugs inhibiting GnRH or androgens (or precursors) or even stimulating hyperPRL. Reduction in SD may also be linked to side effects of certain treatments, the best known of which are those which act on the nervous system such as anti-depressants, psychotropic drugs, tranquillisers or anti-psychotic drugs. Other drugs may cause a reduction in SD such as chemotherapy, those use to treat stomach ulcers, fungal infections or interferons. Most contraceptive pills containing progestogens may also have an undesirable effect on SD.

Impacts linked to life events

During pregnancy, interest in sexual activity sometimes decreases during the first months, often linked to a general decline in health (sickness, discomfort, breast pains etc) or when the desire for a child is the main motivation for sexual relations. After three months in some women SD notably increases. SD declines once more at the end of the pregnancy linked to problems of insomnia, weight gain, change in body image or perineal pain (Pauleta et al., 2010). The post-partum period is also not very favourable to SD. The physiological and psychological consequences of giving birth, combined with the new position taken by the baby, together create in women a lack of interest in sexual matters for varying lengths of time. Breastfeeding also has a harmful effect on SD both psychologically (intimate link and sensual bodily contact with the baby) and physiologically (secretion of prolactin which partly inhibits SD). Furthermore a physical or sexual attack, robbery or vandalism, the discovery of family incest, a death or the illness of a child can all regularly cause post-traumatic stress disorder (PTSD). Among the different symptoms, a kind of emotional detachment can observed which implies also a reduction in SD (Carlson, 1997; Lipoovsky, 1992).

Impacts linked to age

With life expectancy regularly increasing in the West, physical and mental health improving, men and women also wish to have satisfying relations and an active sexual life (Le Deun and Gentric, 2007; Rowe and Kahn, 1998). For example, one third of men and 21% of women between 70 and 80 claims to still have sexual relations (Laumann et al., 2005; Nicolosi et al., 2004). Nevertheless, SD diminishes with age (Delamater and Sill, 2005). From the age of 75, the level of SD is low for the majority of men and for nearly all women. After the age of 85, neither men nor women show a high level of SD even if they are still interested in 'sex' (Mulligan and Katz, 1988). In addition, sexual difficulties linked to ageing do not suppress sexual interest. Even though a third of elderly subjects report at least one sexual problem, nearly 60% wish to maintain sexual activity (Camacho and Reyes-Ortiz, 2005). In women, ageing brings fewer sexual dysfunctions than in men (apart from problems of vaginal dryness and sexual pain) (Hayes et al., 2006; Laumann et al., 1999). This rather paradoxical situation (decline in sexual interest without increase in sexual dysfunctions) may be explained by:

- better acceptance of or adaptation to biological changes of a sexual nature (particularly the menopause);
- a decline in SD that is relative but more frequent than in men (Bretschneider and Mc Coy, 1988; Hayes et al., 2006; Lindau et al., 2007) which could be linked to a lowering of self-esteem and anxieties linked to their partners' problems.

Furthermore, women often seem to be more sensitive in their SD to the environment (romantic, emotional and socio-cultural) than men (Colson, 2005; Dennerstein et al., 2005).

Emotional factors

Recent research has seemed to support a model in which thoughts, emotions and sexual reactions are organised like a systemic structure where they interact together (Nobre and Pinto-Gouveia, 2006a, b, 2009). Many sexual problems are indeed linked to dysfunctional emotional management. Female SD is no exception.

Feelings of love and emotional insecurity

The perception of love increases with the length of a couple's relationship (Sprecher, 1999). On the other hand, behaviours motivated by SD are less frequent in more established relationships (Sprecher and Regan, 1998). The interesting phenomenon about long-established couples is not intrinsically SD but rather the disparity, which accompanies it. A process can often be observed in which, on one side, the partner without HSDD is considered as having the greatest sexual needs and, on the other side, the partner with HSDD having the greatest emotional needs plays the role of the person who is inadequate at the sexual level (Clement, 2002; Tremblay, 1995).

Feelings of guilt

The feeling of guilt may be due to the inter-generational transmission of sexual stereotypes (Firestone, 1990) or even the myths and false beliefs referred to above. Certain women come to believe that they gain pleasure to which they are not entitled from sexual relations. Associated with this feeling, it is not uncommon to find cognitions of the kind 'A good woman responds to the sexual initiatives of her partner but should not show her own sexual desires.' For others, work relating to the household, children and so on must be completed before they can gain pleasure without a feeling of guilt.

Feelings of repugnance

It is either partners who provoke disgust with poor hygiene or inappropriate attitudes (vulgar jokes, invasive touching, coarseness, agressiveness etc.), or sexuality itself, which disgusts women. Sexual smells, erotic moaning or genital organs are considered to be repugnant. Moreover, there are also specific aversions such as sperm phobia, for example.

Feelings of fear and anxiety

There are many different sources of anxiety resulting from various factors. Frequently there is the fear of unwanted pregnancy or of contracting an STI. Despite the widespread availability of contraceptives, there are still clear worries, even for the younger generations (Bajos et al., 2008). Fear and anxiety may also be the consequence of an unrealistic concept of sexuality in which women do not feel equal to a highly elevated idea of what (according to them) perfect sexuality should be. They fear they will not reach orgasm or not give enough pleasure to their partner etc. Feelings of fear and anxiety are also frequently associated with HSDD (Kaplan, 1979, quoted by Stuart et al., 1987). It should however be noted that, on the contrary, Katz and Jardine (1999) did not demonstrate this link in a non-clinical student population.

Feelings of anger

The impact of anger on sexual functioning has only been studied to a very limited extent. Yates et al. (1984) looked for the link between a feeling of anger and deviant sexual arousal. Their research showed that this emotion may well encourage sexual arousal, Conversely, Bozman and Beck (1991) reported that anger decreases desire and arousal. A minority of women may feel SD during conflict or by experiencing negative emotions towards their partner whilst, for the majority, resentment towards the partner inhibits the desire to make love. Anger, frustration, resentment, animosity or hostility towards men in general and the partner in particular have a negative effect on the desire to have intimate relations.

Behavioural factors

It should not be forgotten that sexual functioning is not just restricted to the brain. We make love with our bodies. Our movements, actions and gestures are also behaviours, which have a considerable influence on whether sexual experience succeeds or fails. Success increases the desire to do it again whilst repeated failure inhibits SD. Certain behaviours reinforce the desire to make love while others inhibit it.

Avoidance strategies

Avoidance strategies are frequently used in HSDD. Their aim, more or less conscious, is to reduce the possibilities for sexual interaction and thus the feeling of unease associated with it (McCarthy, 1984; Trudel et al., 2000). Such behaviour can be observed in both sexes but according to Schover and LoPiccolo (1982), is more common in women. Logically, the more a woman avoids sexual interactions, the greater the pressure from her partner, the higher the stakes become and the more resounding the failure. This only serves to reinforce her desire to avoid occasions for sexual intimacy. In the short term, avoidance brings relief to the woman. In the long term, it makes things worse.

Acceptance of sexual relations without SD

Surprisingly, the study carried out by Stuart et al. (1987) showed that 68% of female participants in their sample with HSDD were more inclined that those without HSDD to respond positively to a request from their partner so as to avoid hurting them. Such an attitude, whilst full of good intentions, produces the contrary effect to the one intended as behaviour which consists of repeated acceptance of undesired sexual relations often brings about total rejection of dyadic sexuality in the medium term.

Lack or absence of receptivity

The concept of receptivity has been created, particularly by Basson (2008). It can be defined as the ability of a woman to receive, accept and eroticise male SD. Not only does this involve accepting the male penis physically inside her but also interacting symbolically with male sexuality. With this erotic masculine energy, the receptive woman can choose to stimulate, arouse, initiate, direct, channel or transform it through different receptive behaviours. Female sexual receptivity is a cognitive, emotional, behavioural

and physiological process, which is by no means inactive but on the contrary, highly interactive. It should therefore not be confused with simple mechanical acceptance of sexual relations. Certain women have only developed their proactive sexual receptivity to a limited extent, or sometimes not at all, and only function in a passive way. They expect the man to be the one to take the initiative, to stimulate and arouse them.

Detachment linked to routine

According to Trudel et al. (2003), the effect of habituation linked to the length of a couple's relationship can influence SD. Leiblum and Rosen (1988) also show, in long-standing relationships, the impact of routine on the decrease in SD. Poudat and Jarousse (1989) describe the weariness and lack of excitement which can appear in the long term. Couples develop amorous and sexual rituals which can slide into automatic reflexes which are too familiar and predictable. Nevertheless, life should ideally be a combination of routine and creativity. Constant creativity would, of course, be exhausting and intolerable but too much routine can suppress vital energy and can lead to a kind of erotic mummification.

Focus on erogenous zones

An encounter between two individuals very often begins by sensory discovery. Sensuality enables bodies to become accustomed to each other, to find a harmonious rhythm, to communicate tenderness and love and to express the need for intimacy and closeness. These sensory exchanges enable couples to get to know each other increasingly well, to be sensitive to each other, their skin texture, their smell, their way of reacting. The risk is that, sometimes, with time, the couple's sexuality drifts aways from this global sensuality which is vital for the arousal of SD and becomes focused on genitality which neglects the senses and goes directly to the primary sexual organs (penis, vulva, vagina, breast and buttocks). Frequent in men, this development towards genital sexuality suits women to a lesser extent, as they often need to experience sensuality before moving on to sexuality. Women often therefore develop a real erotic allergy when men make an overly direct approach to their primary sexual organs.

Low frequency of sexual relations

In the long term, couples tend to align their sexual behaviour according to the SD of the less demanding partner (Clement, 2002), but the less you make love, the less you feel the desire to do it. This goes for sexuality, as for sport or other human behaviours, which, below a certain frequency, lose their attraction.

Environmental factors

When considering SD and hypoactivity in a couple's relationship, we should also think about the organisation of intimacy in the context of a couple's relationship, especially those of long standing.

Over-investment in extra-marital areas

HSDD can be linked to over-investment in extra-marital areas. This may cause problems if one or both members of the couple devote a great deal of time and attention to their work, hobby, sport, friends etc. Moreover, society places enormous value on activities of a strongly social nature (Lopès and Poudat, 2007) such as having a good career or a beautiful home, taking care of elderly parents etc. The birth of a child also brings drastic changes for most couples and a negative correlation between SD and the presence of young children has been demonstrated (Mitchell et al., 2009). Not only is this due to the fact that parents over-invest in their role as parents and neglect their role as lovers, but mainly because physical and psychological exhaustion goes hand in hand with being a parent.

Couples in unstable relationships

Many research studies (Donahey and O'Carroll, 1993; Schiavi et al., 1992; Stuart et al., 1987; Trudel et al., 1993; Trudel, 1992) have shown a clear link between marital problems and HSDD. However, it seems crucial to us to point out that these studies do not enable us to determine whether these relational difficulties arise because of sexual dysfunction or, on the contrary, whether they are the cause. Tremblay (1995) suggests that the development of sexual problems in such couples occurs in parallel with the deterioration in their relationship.

Poor management of intimacy

Various studies (Girardin et al., 2005; Widmer et al., 2004) have shown that the way in which couples manage their connection to the environment is variable. Certain authors (Fish et al., 1984; Schwartz and Masters, 1988; Talmadge and Talmadge, 1986) believe that difference in SD is an indicator of low intimacy between the two partners. Sexuality in a couple is generally considered as the physical expression of an emotional tie. In cases, therefore, where emotional proximity cannot be tolerated for various reasons by one or both partners, HSDD appears to be an effective way to create and maintain all the distance they need. A second viewpoint is provided by the studies of Desjardins and Henrichon (1983) who emphasise the tendency of SD to create an effect of symbiosis with the person they desire and it is this excessive proximity, which destroys SD over the long term. Fusion is therefore the worst enemy of desire and love in the long term. The correct balance between distance and proximity is vital for both members of the couple and it is for them to establish this in the light of each person's limits and needs.

Poor communication within the couple

In one of their studies, Trudel et al. (2001) report that couples identified poor communication as one of the main causes of female HSDD. It therefore seems vital that we should communicate what we like to our partners to encourage them to play an active role in achieving the sexual and emotional fulfilment of both individuals.

Inadequate stimulation by the partner

A partner's inexperience or lack of skill (Lopiccolo and Friedman, 1988; Poudat and Jarousse, 1989) may have an inhibitng effect on SD. Indeed, SD is partly sustained, in a circular process (Basson, 2008), by the sexual satisfaction gained from successful intercourse. Clumsy caresses, overly direct gestures or botched or excessive foreplay contribute to growing dissatisfaction.

Low levels of attraction within the couple

Several authors (McCarthy, 1992; Stuart et al., 1987; Trudel, 1991) refer to a partner's lack of attraction to explain (in part) low SD. All human beings possess ''codes of sexual attraction' to decipher what is desirable in a potential sexual partner. This enables them to identify ideal partners and the kind of activities, relationships and sexual roles they will adopt together. Sexual arousal comes from the association of a sensation and a cognition listed in the memory. So if an individual is confronted with someone who bears no relation to their ''code of sexual attraction', SD and arousal are likely to be non-existent. (Chatton et al., 2005).

Presence of an additional sexual dysfunction

A male or female sexual dysfunction may be the basis of female HSDD. Indeed increasing disinterest in sexual relations can occur if one or more comorbidities continue (Clayton, 2007). For example a partner's premature ejaculation or erectile dysfunction make sexual relations less motivating; dyspareunia or the lack of an orgasm reduce a woman's pleasure. As a result, there can be a lack of interest in sexual activities and a decline in the desire to initiate them.

Social influences

Some authors (Simon and Gagnon, 1987) believe that human sexuality (and its dysfunction) is strongly influenced by the cultural and social environment. We should mention that, in some cultures, it is socially accepted that women do not have SD: sexual desires are considered as exclusively masculine. Today, in the West, mutual SD and consent have become the new norm. The fact remains nonetheless that the woman should sexually satisfy her partner. However, a woman who is too interested in sexuality is poorly viewed in her environment (Trudel et al., 2003). There are families, socio-cultural environments or religious groups where female sexuality is accepted to a greater or lesser extent and develops accordingly. In the same couple there can be individuals who have been brought up with radically different sexual ethics and values. This creates a problem of adapting to each other. The socio-economic environment can also be unfavourable to SD. Having to live in conditions of insecurity, in unhealthy or overcrowded accommodation does not favour SD and the emergence of SD in the long term.

Conclusion

This etiology with its five different axes enables clinicians to assess all the elements responsible for HSDD. The model is designed to highlight the dysfunctional elements responsible for the appearance and continuation of HSDD. In this way, professionals can target their treatment by being aware of the multi-factor nature of HSDD when taking a medical history.

Conflict of interest statement

None.

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