REVIEW

Sexual Counseling in Elderly Couples

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ABSTRACT

Introduction. Sexual health of the elderly has long been either a taboo or a non-medical life style luxury issue. Increasing longevity of women and men, reconceptualization of sexual health as part of general health, and the development of drugs aiming at improvement of sexual function have contributed to a change in the attitude of the elderly and the medical community, thus increasing the demands for help.

Aims. To respond to these demands, caregivers need to be informed about the statistics concerning the sex life of the elderly, need to understand the biological, psychological, interaction and social factors that determine the sexual health of the aging population, need a comprehensive diagnostic and therapeutic approach, taking into account the specific characteristics of the aging male, female, and the couple.

Main Outcome Measures. Diagnostic and therapeutic algorithm integrating the biopsychosocial profile of the aging male and female and the interaction characteristics of the couple.

Methods. Review of the literature, analysis of cases, and review of multidisciplinary case discussions of elderly couples with sexual problems consulting the Division of Sexual Medicine at the University Hospital of Basel.

Results. Sexual dysfunction is highly prevalent in the aging population, with hypoactive sexual desire disorder and pain disorders being the most frequent in women, and premature ejaculation and erectile dysfunction being the most frequent in men. The specific characteristics of the sexual ill health in elderly couples are the interactions of physical and mental morbidity including therapies, multidimensional sexual dysfunctions in both partners, dyssynchrony in personal development and sexual scripts, and a longstanding fixed interactional pattern with rigid "sexual roles." The diagnostic approach has to integrate sexological descriptive diagnoses of both partners, their biopsychosocial profile, and the couple's history and interactional pattern. From this diagnostic framework, caregivers must design specific, multidisciplinary therapeutic strategies for the elderly couple, which include biomedical, individual psychotherapeutic, and systemic interventions in various combinations.

Conclusion. The increasing demand for help of elderly couples with sexual dysfunction requires a multidisciplinary approach in diagnosis and therapy combining the knowledge and skills of urologists, gynecologists, internists, and various mental health professionals to provide individualized age-related care. **Bitzer J, Platano G, Tschudin S, and Alder J. Sexual counseling in elderly couples. J Sex Med 2008;5:2027–2043.**

Key Words. Aging; Sexual Health; Female and Male Sexual Dysfunctions; Elderly Couple; Diagnostic Workup; Multidisciplinary Therapies

Introduction

The sexual health of aging men, women, and couples has long been considered either a taboo or a non-medical life style luxury issue. With all the important problems of aging such as immobility, intellectual decline, incontinence, isolation, and pain, the sexual life of elderly populations did not seem to have an important impact on general health and/or quality of life [1]. An evolutionist perspective claims that after the reproductive phase, sexuality loses an important biological motivator,

manifesting itself in the decreasing or even disappearing importance of sexuality for older people.

However, there may be some biases in this concept: sexual problems have always been a matter of shame, nondisclosure, and uneasiness, which may have contributed to an underreporting of these problems.

Another bias may come through social perception and culturally determined aestheticism. Sexual activity in elderly people does not fit into a culture obsessed with youth and perfect beauty. Old bodies being involved in sex is not a common fantasy in society. It is socially not desirable and, therefore, less researched.

But the situation seems to be in a phase of change. Several reasons are to be noted:

- The growing rate of older people without major health impairment has led to changes in attitude about the importance of sexual health of this population [2,3].
- The development of medication designed specifically for sexual dysfunction that occurs mainly in the older population has tremendously increased the interest of important professional groups concerning the issue of sexuality in the aging people [4,5].
- The increasing awareness about sexual aids has made aging men and women aware of therapeutic possibilities and has increased their demand [3].
- Sexuality is being reconsidered as having possible different health-related functions in the elderly population: decreasing tension, creating closeness to another person, recreation instead of procreation, joy and pleasure as part of mental health [6].

These changes have contributed to the fact that an increasing number of elderly couples seek help for their sexual problems and difficulties. In our institution (Division of Sexual Medicine, University of Basel), the number of visiting individuals and couples older than 60 years of age has increased, confronting the medical professionals with new challenges. Therefore, it seemed necessary to develop a specific diagnostic and therapeutic algorithm designed for the care of this age group.

Methods

We divided our work into two parts. In part 1, we performed a literature research about epidemiological statistical data concerning the sex life of elderly couples.

In the second part, the diagnostic procedures and the evidence collected about therapeutic intervention were reviewed and as a proof of concept study, we analyzed the full diagnostic workup and the therapeutic interventions performed in 16 elderly couples defined as couples in whom both partners were 57 years or older (maximum 84 years in the male and 82 years in the female partner), including the results of the multidisciplinary case discussions and evaluations (gynecologists, urologists, internists, mental health professionals), with the aim to establish a clinical guideline for diagnosis and therapy in this age group.

Results

Sexual Activities and Dysfunctions in the Elderly Population

Research regarding the sexuality of the aging male, female, and couples is associated with several difficulties:

There is no clear consensus about when aging, with respect to sexuality, starts.

- Is it at 40 years with the gradual decline of androgens?
- Is it around 50 years, around menopause in women, and about the same age in men?
- Is it around 65, when older age begins?

What Types of Studies Should be Considered Valuable?

Cross-sectional studies have the advantage of allowing a broad range of ages to be investigated with relative ease; however, the effects of age and cohort membership are inevitably confounded.

Longitudinal studies allow examination of both aggregate trends and intra-individual patterns of change. In a given sample, patterns of decreasing, increasing, or constant sexual functioning can be observed. But longitudinal studies are difficult to perform, especially over a prolonged period of time. This is the reason why most longitudinal studies are of limited duration, for example, in women around menopause [7].

What Should be Measured and How Should It be Measured?

Studies may focus on very different types of data:

- *Frequencies*: Sexual activity with a partner, sexual activity without a partner, orgasm, etc.
- *Qualities*: Intensity of desire, arousal, quality of orgasm, sexual satisfaction, satisfaction with the sexual relationship, etc.

- *Symptoms and dysfunctions (frequency and intensity)*: Lack of sexual desire, arousal difficulties, difficulties to reach orgasm, pain during sexual activity, etc.
- *Personal or relationship-related distress caused by sexual problems*: These data can be collected either by questionnaires (validated or nonvalidated in the specific age group), semi-structured interviews (telephone, face-to-face), or open interviews.

This means that our empirical knowledge about the sexual life, the experiences, and especially the degree of individual suffering because of sexual problems in the older women, men, and couples is limited.

There seem to be, however, some results that are confirmed. In a review of the literature, Hayes and Dennerstein summarize the findings concerning women [7]:

- In women, there seems to be a decline in the frequency of sexual activity with age [7,8].
- It seems that a woman's sexual function starts to decline sometime between her late 20s and her late 30s, a decline mainly in sexual desire and sexual interest.
- The frequency with which women experience orgasm seems also to decline with age, but there is a large variability.
- Arousal may decrease with age or remain constant.

However,

- The number of sexual difficulties and dysfunctions women report remains fairly constant with increasing age, the exception being sexual pain which appears to decrease.
- Difficulties in achieving orgasm consistently show no association with age.
- Arousal difficulties seem to increase, decrease, or remain constant during aging.

This means that the age-related decline in different aspects of a woman's sexual life is not associated with an increase in self-reported dysfunctions, which may be either explained by the observation that the importance of sexuality for women seems to decrease with age [9], or that women do not want to disclose their sexual difficulties.

The Massachusetts Male Aging Study (MMAS) [10] and the National Health and Social Life survey [11] report the following findings about age-related changes in male sexuality:

- Sexual dysfunction, presenting as erectile impotence, diminished libido, or abnormal ejaculation, first emerges as a problem for men in their early 40s and increases with advancing age.
- At age 40, 40% of males acknowledge some level of impaired sexual function and another 10% recognize waning sexual prowess or interest with each succeeding decade.
- A 9-year follow-up study of the MMAS cohort confirmed the age-associated declines in most domains of sexual function: sexual intercourse, erection frequency, sexual desire, satisfaction with sex, and difficulty with orgasm [12].
- There seems to be a sharp decline in overall sexual function, desire, and orgasm by decade after 50 years of age [13].

In a recent large study [14], it was shown that the prevalence of sexual activity declined with age. There was a prevalence of 73% of sexual activity in respondents who were 57–64 years, 53% among respondents who were 65–74 years of age, and 26% among respondents who were 75–85 years of age. Women were significantly less likely than men at all ages to report sexual activity. Among those who were sexually active, about half of both men and women reported at least one sexual problem that led to sexual impairment. The most prevalent problems among women were low desire (43%), difficulty with vaginal lubrication (37%), and ability to climax (34%). Among men, the most prevalent sexual problems were erectile difficulties (37%). Men and women who rated their health as being poor were less likely to be sexually active and were more likely to report sexual problems. A total of 38% of men and 22% of women reported having discussed sex with a physician since the age of 50 years.

There is much less information about the sexuality of couples during the aging process. It has been shown in several studies that the length of the relationship is correlated to a decline in the frequency of intercourse and a decline in sexual desire and interest [14–16].

It is also evident that the sexual expression of one partner has an important impact on the sexual life of the other partner.

A frequent reason for cessation of sexual activities in women are sexual problems and dysfunction of their male partners [17]. In one study of 534 Chilean women aged 40–64 years, the most common reason given for ending sexual activities was erectile dysfunction (ED) in the partner, in women younger than 45 years, low sexual desire

in women 45 to 59 years, and lack of partner for women older than 60 years [18].

Aging and Sexuality—Biopsychosocial Changes and Responses

Aging as a biopsychosocial process impacts sexuality in various ways:

1. Age-related organic and metabolic changes specific for men and women influence sexual function.
   - Degenerative changes in the vascular supply may lead to a decreased capacity of dilatation of vessels with subsequent dysfunctions in the arousal phase of men and women with clinical manifestations of ED or diminished lubrication [19–21].
   - Metabolically induced deterioration of neuronal function may result in decreased sensibility and neurovascular and neuromuscular reaction with negative impact on sexual receptivity and response to stimulation [22–24].
   - Decline of sex steroid hormones may be accompanied by a diminution of the biologically determined part of sexual drive and/or lead to changes in genital mucosa resulting in discomfort and pain [25–28].
   - The increased general morbidity and the increased use of medication play an independent biomedical role in the pathogenetic mechanisms that may lead to impairment of sexual function [29–37].
2. Age-related affective and cognitive changes impact on sexual function in both genders.
   - Depressed mood in many clinical variations is a leading cause of sexual dysfunction as well as the use of antidepressant drugs [38,39].
   - Deterioration of cognitive function and difficulties to communicate can cause loss of intimacy and emotional closeness which then may result in sexual withdrawal and difficulties. Repetitive experiences of failure increase personal vulnerability, performance anxiety, and distress [40].
3. Age- and duration-related changes in a couple's dynamic interaction have an independent influence on both partner's sexual life (see above).

There are different possible responses to these changes.

The first consists in withdrawal from sexual activity consented by both partners. This decision for a "sex free" life together is in general not harmful to the health of both partners. For example, in John (62 years) and Mary's (60 years) marriage, sex has never been a very important part of their relationship. It was much more about emotional intimacy, togetherness, stability, and building a family with kids. They come to the consultation because they wonder if they are normal.

The second response is withdrawal from sexual activity by one partner but not by the other. This discordant decision with respect to the couple's sexual life may have harmful consequences such as chronic tension, deterioration of other aspects of the couple's life, or even extramarital affairs. The withdrawing partner may become a patient presenting with a lack of desire, which is not experienced as a personal distress but much more as a threat to the relationship. One example is a 58-year-old female patient presenting with hypoactive sexual desire disorder (HSDD). During further exploration, it becomes clear that she would rather lead a life without sex, but that she sees her husband suffer and that she is afraid of losing him. During the following consultations, it becomes evident that the husband had tried an extramarital affair, but that he felt ashamed and humiliated by the other woman who complained about his rapid ejaculation.

The third response is the active search for help by one partner who experiences age-related changes in his/her sexual function, distressing him/her, while the other partner considers himself/herself free of sexual problems. The symptomatic partner wants to re-establish a better quality of his/her sexual life. The partner's view of the importance of the sexual dysfunction may vary considerably from very important to not important at all. Example: John (64 years) is suffering from a loss of erectile strength. He enjoys sex much less, feels much less male, and less satisfied after intercourse. He actively seeks help and wants to use a phosphodiesterase type 5 inhibitors (PDE5). His wife (54 years) is against this "unnatural" treatment and finds the status quo preferable to any change because she did never get much pleasure from intercourse.

The fourth response to age-related changes is that both partners suffer from these changes and they seek active help. Example: Sarah, a 61-year-old patient, has been experiencing difficulties in arousal, orgasm, and sometimes pain during intercourse for many years. She did not talk about these problems with Jack (68 years) who initiated sex usually but had also developed, over the years, ED

which had led him to gradually decrease his sexual initiatives. When Sarah discovered that Jack used pornographic material for masturbation, she felt alarmed and shocked and confronted her husband with her anger and frustration. Jack felt ashamed and admitted that the sexual routine that had developed in their relationship had made it more and more difficult for him to get mentally aroused, which contributed to his partially age-dependent ED. They both realized that they would need some help and Sarah talked about their problems with her gynecologist.

From these examples, it becomes quite evident that there is no standard sexuality of the aging male, the female, and the couple, but there are several independent but interacting factors that determine the phenomenology of the individual's and couple's sexual life:

- The sexual scripts of the individuals and their shared relationship script.
- The type and intensity of the age-related biopsychosocial changes of the man and the woman.
- The type and intensity of the age- and duration-related changes of the relationship.
- The way the individuals cope with these changes (their individual and their relationship resources).

Sexual Health of the Elderly—The Specific Challenges

Looking at the empirical data, it becomes evident that the sexual health of the elderly male, female, and couples is the result of a complex interaction of biological, psychological, relational, and sociocultural factors. Caring for the sexual health of this group of patients has to deal with some basic facts, which vary among individuals and couples.

- Physical morbidity (including treatment).
- Psychological morbidity (including treatment).
- Sexual dysfunction that is frequently multidimensional.
- Sexual dysfunction in both partners.
- Possible discrepancy of the personal development of the partners and their sexual scripts.

Diagnostic Workup and Therapeutic Interventions

Diagnostic workups and therapeutic interventions performed on 16 elderly couples were analyzed with respect to the performed diagnostic steps, the communication with the patients, the therapeutic decisions made, and the outcomes observed. The results of multidisciplinary case discussions were integrated and these results were compared to reports in the literature.

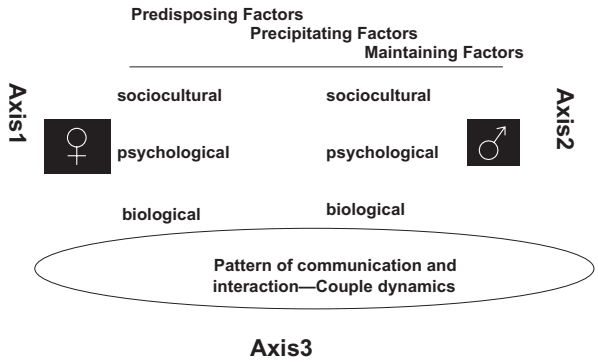

Figure 1 Sexuality of elderly couples.

The diagnostic process was characterized by a multidimensional approach required to respond to the specific conditions contributing to the sexual difficulties of elderly couples. This means that the diagnostic workup has to integrate not only general medical, gynecological, urological psychiatric, and individual psychological findings in the woman and the man (Figure 1, Axis 1 and Axis 2), but also take a systemic perspective which deals with the interaction pattern of the partners in a frequently longstanding relationship (Figure 1, Axis 3 and Time Axis).

The 16 elderly couples seen in our institution underwent a stepwise multidisciplinary evaluation, integrating biomedical, psychosocial, and systemic information and perspectives to establish a comprehensive diagnosis.

Step 1. Sexological Descriptive Diagnosis

The first step was the establishment of a descriptive diagnosis of the sexual dysfunction according to the different clinical conditions given in International Classification of Diseases (ICD) 10 or Diagnostic and Statistical Manual (DSM) IV [41,42].

Both classification systems require that the dysfunction described leads to personal distress or interpersonal difficulties. It is important to assess the degree of distress and severity of the difficulties, as well as the duration of the problem and the contributing factors observed by the patient(s) themselves.

The most frequent complaints in the 16 women >57 years are reported in Table 1.

In eight women, pain during intercourse dated back several years and had led to gradual diminution of sexual interest and arousal disorder. Pain was not reported by these women to their physician nor was it addressed by their gynecologists.

Table 1 Sexual dysfunctions in females (including combined disorders) (N = 16)

Hypoactive sexual desire disorder	16 women
Arousal and orgasm disorder	10 women
Sexual pain disorder	8 women
Dissatisfaction with sexual life and sexual partner	12 women

Tressler Lindau et al. reported a lack of interest in sex in 44.2% of cases in women aged 57–64 years, 38.4% in the age group 65–74 years, and 49.3% in women aged between 75 and 85 years. Comparable rates were given with respect to lubrication (35.9%, 43.2%, and 43.6%, respectively). Inability to climax was reported in 34.0%, 32.8%, and 38.2% cases, respectively. Pain during intercourse was less frequently reported: 17.8%, 18.6%, and 11.8%, respectively. A quarter of the women reported that sex was not pleasurable.

The most frequent complaints in the aging men >57 years are documented in Table 2. Two men reported that they had suffered from not being able to control their orgasm throughout their entire sexual life. In eight men, premature ejaculation (PE) was secondary to their ejaculatory dysfunction.

In the Tressler Lindau study [14], lack of interest in sex was reported by 28.2% men (aged 57–64 years), by 28.5% (aged 65–74 years), and by 24.2% (aged 75–85 years). Climaxing too quickly was mentioned in 29.5 %, 28.1%, and 21.3%, respectively, and was independent of age; inability to climax was dependent on age: 16.2%, 22.7%, and 33.2%, respectively.

Sexual problems are, as mentioned above, almost always conditioned by several factors. It was therefore necessary to make an assessment of conditioning factors which includes biomedical and psychosocial factors. These factors can be preferably subdivided in factors that date back in the individual history (predisposing) and factors that are of more recent origin.

Step 2. Biopsychosocial Assessment of Women

This assessment includes biomedical, psychological, and sociocultural findings.

Biomedical Factors

In our small sample, we found the following biomedical contributing factors (Table 3).

Table 2 Sexual dysfunction in males (including combined disorders) (N = 16)

Erectile dysfunction (moderate to severe)	12
Premature ejaculation and retarded ejaculation	12
Lack of sexual desire and general dissatisfaction	9

Table 3 Biomedical contributing factors to female sexual dysfunctions (N = 16)

Climacteric and postmenopausal symptoms	14
Dysphoria and depressive mood	10
Depressive episode	5
Obesity	7
Hypertension with treatment	8
Diabetes	3
Musculoskeletal symptoms	8
Breast cancer treatment (6 rsp. 8 years ago)	2

Frequent predisposing conditions to the aging female's sexual dysfunction are hypertension, obesity, diabetes, and rheumatic disorders. Especially thiazide-containing medications have a negative impact on sexuality.

Other predisposing factors for developing sexual dysfunction are affective disorders such as depression and anxiety, which by themselves or through the required medication may contribute to HSDD and arousal disorder, and which are more frequent in middle age and older women than in men.

A precipitating factor of female sexual dysfunction (FSD) is, in many women in this age group, the menopause-related estrogen and/or androgen deficiency. The typical symptoms of estrogen deficiencies are hot flushes, palpitations, and sleep disturbances [43]. Signs of androgen deficiency may be lack of energy, depressive mood, muscular weakness, and diminished sexual desire [44]. Unfortunately, a rather large number of women suffer from breast cancer and undergo treatment of this disease, which both may have a dramatic negative impact on their sex life [24].

Individual Psychological Factors

The results in our sample examining individual psychological factors are detailed in Table 4.

Predisposing factors according to the literature are biographical events with a traumatic impact such as sexual abuse, violence, humiliation, experiences of separation, and abandonment [45]. Certain personality characteristics such as anxiety, dependence, and obsession also predispose to FSD [46].

The midlife transition may bring new life situations that act as precipitating factors such as

Table 4 Psychological contributing factors to female sexual dysfunctions (N = 16)

Negative expectations	15
Loss of self-esteem	12
Anxious-dependent personality	7
Separation history	6
Victim of sexual aggression	4

Table 5 Biomedical contributing factors to male sexual dysfunctions (N = 16)

Diabetes and obesity	8
Hypertension (treated)	8
Benign prostatic hyperplasia	6
Musculoskeletal disorders	5

subjective loss of attractiveness, negative body image, and loss of self-esteem. Negative expectations and performance anxiety can in a self-enforcing way maintain the sexual problems [47].

Finally, physicians should be aware and assess important sociocultural factors that may have an impact on their female patients' sexual life.

Sociocultural Factors

An important predisposing factor for FSD is a sexual education or noneducation that "teaches" rigid norms and roles and leaves very little room for self-exploration and self-determination. Good girls are timid, withdrawn, controlled, mature, and do not have explicit sexual fantasies. Sex is for marriage and reproduction and not for pleasure.

Media messages, literature, art, and even scientific research transmit a model of human sexuality, which is very much oriented towards male sexuality. Predominance of visual stimulation, focus on intercourse, and linear model of sexual reaction reflect male sexual needs and experiences. Women's needs and experiences are socially much less represented and may therefore contribute to women's sexual insecurity and finally dissatisfaction. Part of this social representation of sexuality is what has been called the double standard of aging. This means that aging men are viewed as maintaining or even increasing their attractiveness while aging women lose attractiveness and beauty.

In 14 women of our sample, we found at least one of the abovementioned factors, rigid role models being the most frequent one.

Step 3. Biopsychosocial Assessment of the Male

The biopsychosocial profile of the male patient has to be assessed in the same manner.

Biomedical Factors

Conditions in our study sample are reported in Table 5.

Predisposing factors in men include a very high prevalence of cardiovascular and metabolic diseases (diabetes), which impact the neurovascular sexual response [48–50].

Some of the frequently used drugs act on the neurovascular sexual response such as antihypertensives, lipid-lowering agents, which have a negative impact on male sexual function [34,36].

Alcohol abuse and smoking are also frequently occurring predisposing factors for male sexual dysfunction (MSD) [51].

Prostatic disease is a frequent precipitating factor of MSD [52,53], with variable reports about the incidence of post-treatment MSD.

Other precipitating factors for MSD are depression, antidepressant treatment, and neurological and musculoskeletal disorders.

Individual Psychological Factors

Individual psychological factors found in our sample are reported in Table 6.

Male sexual education is frequently situated between the concepts of "sinful, dirty sex" and role models of "macho sexual performance" with male competitive aggressive behavior. This may be in contrast to what male adolescents feel about themselves and again may inhibit them from developing their own script so that they follow an alienated script, which especially in midlife and later may predispose to MSD [54].

Later in life through biological variation determined "failures of performance" may be experienced as catastrophic and can severely damage self-esteem and the feeling of male identity. Combined with professional stress and threats, these changes can provoke and maintain MSD [55].

Personality characteristics such as narcissistic and schizoid traits or obsessive compulsive behavior make adaptation to age-related changes difficult.

Sociocultural Factors

Although the sociocultural model of sexuality is mainly male-dominated, this does not mean that some men do not suffer from demands and norms that come from this model. The performance- and function-oriented ideal puts pressure on men and may induce feelings of inferiority if they do not correspond to the standard and to what is considered typical for men such as, "men always want sex and they are always ready for sex," "sex must always end with intercourse and orgasm," for example [54]. In almost all men, some elements of these myths and norms were present.

Table 6 Psychological contributing factors to male sexual dysfunctions (N = 16)

Performance anxiety	10
Job stress	8
Obsessive compulsive personality	4
Depression	2

Step 4. The Systemic, Couple-Oriented Diagnosis

In a sexual relationship, two individuals meet each one having his or her sexual wishes, fears, concepts of love, potencies, and temperament. Falling in love means that both partners experience a state of mind in which they feel an almost perfect fit between their respective sexual needs, they feel an urge to be very close, to be always together, to melt with the other. This phase is invariably associated with idealization of the partner, whose virtues predominate and the sexual interaction is almost automatic and does not need to be verbalized. Later in the relationship, both partners become separate individuals again, with their individual needs [56,57].

They become individuals who must face two challenges:

- They must find a balance between their wish for self-realization (autonomy, freedom, independence, self-development) and their relationship-oriented needs (bonding, trust, affiliation, stability).
- They must cope with the "reality" of the other, his or her unknown, undiscovered aspects of their personality, also with respect to sexuality [56,58].

In longstanding relationships, both partners have to work continuously to negotiate and find a balance between [56–59].

- Sameness and difference.
- Bonding and freedom.
- Relationship stability and individual development.
- Give-and-take.

To find these dynamic states of equilibrium, individuals need some capacity of introspection, self-acceptance, and self-knowledge on one side, and communicative skills and repair mechanisms on the other side [59].

Predisposing for relationship dysfunctions which may impair the sexual life of the partners are habituation and routine, which make sexual life less and less enjoyable and attractive to both partners. If there is a lack of fantasy or flexibility of sexual behavior due to an excessive fear of any change that may endanger the stability of the relationship, this routine impact cannot be overcome [56].

Other predisposing factors are preexisting unresolved chronic conflicts about give-and-take, dominance, and dependence, as well as large differences in the individual development of the partners which all may contribute to an alienation and loss of sexual intimacy [58].

Table 7 Couple related factors contributing to male and female sexual dysfunction

Habituation and routine	16
Difficulty in communication	16
Unresolved preexisting conflicts	10
Asymmetry in personal development	8
Respect, solidarity	12
Diminution of stress and performance constraints	6

An age-related loss of attractiveness may act as a precipitating factor, sometimes leading to extramarital affairs and jealousy.

Destructive patterns of interaction are reproach, justification, and blocking [58]. They maintain the distance and may aggravate the difficulties.

There are not only relationship-dependent risk factors for FSD and MSD, but couples also have resources for resolving problems and repairing damage.

An important longstanding resource is the shared life story, shared experiences, and above all a long-term cultivated emotional intimacy, which all contribute to respective empathy and solidarity. These factors may lay the foundation for exploring new pathways in the couple's sexual life, to redefine one's sexual identity, and to disclose it to the partner. A positive aspect of aging is the possible lessening of performance stress and increased composure and patience [56–59].

Table 7 documents the interaction patterns in patients.

The sexological descriptive classification, the biopsychosocial profile of the individuals, and the characteristics of the couple's interaction together provide a comprehensive and explanatory diagnosis of the sexual (ill) health of men, women, and couples (see Figure 2).

Therapeutic Process and Interventions

The therapeutic process is again characterized by a stepwise approach.

Step 1. Round Table with Couples

The first important step in dealing with sexual problems and dysfunctions is what we call a round table with a couple. This round table discussion serves the purpose to discuss with both partners the following questions and issues:

- What does the status quo look like and what are possible advantages of the present situation?

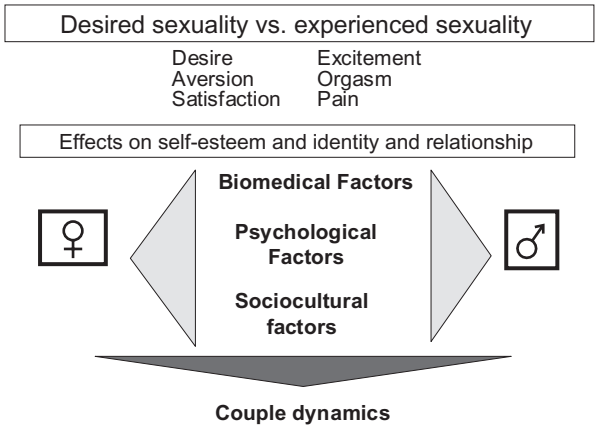

Figure 2 Comprehensive diagnosis.

- What are the benefits and risks if the sexual problem disappears?
- What exactly should change and what should stay the same?
- What can he/she change herself?
- What must be accepted by him/her?
- Replacing 100% objectives by stepwise approaches (50% could be an acceptable alternative).
- Rehabilitation instead of therapy.

The explicit discussion of the objectives of therapy is a prerequisite to clarify the individual woman's and man's desired changes and whether these wishes coincide or not. The communication about these issues helps couples understand the possible "function" the sexual problems had in maintaining a status quo and also in maintaining stability. Therefore, some desired changes may, on a second look, cause anxiety and may carry some risks. It is also important to find out who should change, how and what should remain the same, or what has to be accepted as a non-changeable reality. Frequently, the unspoken wish to re-establish the sexual life of, say, 50 years ago can thus be questioned and more moderate objectives or stepwise approaches can be discussed.

There are today many therapeutic options for aging women, men, and couples, which have to be tailored to the individual clinical situation delineated by the comprehensive diagnosis. An essential therapeutic contribution for all couples is, however, basic counseling and information giving.

Step 2. Basic Counseling and Information Giving

Many couples are not aware of the physiology and the psychology of sexual function and sexual intimacy. Explaining how aging has an impact on this and how other individuals and couples experience these changes is an important step in empowering the couple to better understand what happens to them and to feel less irritated, insecure, and stressed. It allows the physician to diminish the shame and difficulties associated with a talk about sexuality and thus may provide emotional relief. Part of this psychoeducational effort is the clarification and correction of the sociocultural myths and prejudices described above and the encouragement of the couple to define their very own sexuality.

As described above, physicians and counselors may help the couple to become more aware of their often only semiconscious sexual scripts which are not only partially unknown to themselves but are frequently completely unknown to the partner. Helping the couples to become their own author of the script, which may be rewritten and modified according to the changes of aging, is an important step to involve the couple actively in the therapeutic process.

For the couples treated in our department, this basic intervention had a very important impact. Thirteen out of 16 couples stated that talking to the physician in an open manner had helped them a lot. The moderation and help in communication was also considered very important.

Here are some comments:

> "Nobody talks about it . . . it feels so good to be understood and taken seriously"
> "The main thing for us was that we learned about ourselves and that we can better understand what happens to our sexual life"
> "We have never been able to really talk about our feelings . . . that sex and love may mean so different things to each one of us . . ."

Step 3. Brainstorming about Biomedical and Psychosocial Interventions

Couples have to be informed about the different biomedical therapeutic options and their indications for women and men.

Women (Biomedical Interventions)

Different therapeutic options are available: Systemic estrogen (oral or transdermal) combined with progestogen is indicated in sexual dysfunction (desire and arousal disorder, pain disorder) linked to climacteric symptoms such as hot flushes, sleep disturbances, palpitations, depressed mood, and urogenital symptoms [60]. In women, after hysterectomy with the same symptoms, estrogen only therapy can be performed.

Several studies have shown that estrogen alone is not able to treat all sexual symptoms effectively

but that the addition of testosterone increases the effectiveness especially for desire and arousal disorders [61–63]. The main indication for this combined treatment is in women after bilateral ovarectomy, but recent studies indicate that this treatment may also be effective in women after natural menopause provided that there is an androgen deficiency [64].

The absolute and relative contraindications to long-term estrogen alone, combined estrogen/progestogen, and androgen treatment have to be taken into account [65,66].

Absolute contraindications are the presence of cardiovascular diseases (myocardial infarction [MI], thrombosis, cerebravascular accident [CVA] etc.), breast cancer, and acute liver disease. Relative contraindications which demand clinical judgment are a combination of cardiovascular risk factors (hypertension, obesity, etc.) age over 65 years, genetic risks for breast cancer. It seems, however, that in women in the age group between 45 and 65 years with climacteric symptoms and symptoms of androgen deficiency especially after ovarectomy, systemic estrogen/progestogen and androgen therapy are valuable options in which the possible benefits outweigh the risk by large.

It is known that some of the risks described above are dependent on the duration of treatment. For the moment, it is not known whether there is a defined time limit of treatment. It seems, however, necessary to reevaluate the indication of the treatment every 1 or 2 years.

An alternative treatment is the use of tibolone, which has been proven effective in women with HSDD [67]. The safety of tibolone is still under investigation and some controversial results have been reported. A positive characteristic of tibolone is the diminution of breast density found in mammograms of women using tibolone. As breast density is considered a risk factor for breast cancer and as the mammographic detection of early cancers is more difficult in dense breast tissue, this property of tibolone has been considered positive [68]. In the Million Women Study, however, a slight risk increase for breast cancer in tibolone users was found [69].

Pain disorders in women because of atrophy of the vaginal mucosa respond very well to local estradiol or estriol treatment. Local estriol therapy does not require additional progestogen therapy and can be applied even in women after treatment of breast cancer [70].

Sildenafil has been investigated in women with arousal disorders with variable and partially controversial results. It seems that there is some effect in physical arousal disorder [71,72].

Selective serotonin reuptake inhibitors (SSRIs) may negatively impact sexual function in women and men. It may be necessary to change medication to an antidepressant with neutral or even positive effects on sexual desire and sexual function such as Bupropion.

At the same time, the biomedical therapeutic options for men have to be presented.

Men (Biomedical Interventions)

The use of PDE5 to treat ED in men is a major breakthrough in the biomedical treatment of MSD. The therapy has been proven effective in ED caused by different pathogenetic mechanisms, for example, in diabetes, post-prostatectomy, age-related vascular insufficiency, drug-induced impairment, etc. [4,73–80].

Three PDE5—sildenafil, vardenafil, and tadalafil—are now approved for the treatment of ED. They inhibit the cyclic guanosine monophosphate (cGMP)-specific isoform 5 of phosphodiesterase, resulting in cGMP accumulation, which, for example, in smooth muscle cells, reduces muscular tone. In the cardiovascular system, they slightly reduce arterial systemic blood pressure. This moderate effect was also shown in combination with many antihypertensive drugs.

The important contraindication is the concomitant use of PDE5 with any drug serving as nitric oxide donor, as this combination can lead to significant arterial hypotension. Caution is needed in patients on alpha-blocking agents. In general, this class of drugs was not shown to exhibit direct deleterious effects on the myocardium or promote arrhythmias. Furthermore, statistical evaluations did not demonstrate an increased risk for patients taking PDE5 in comparison with an adequate control population. It becomes clear that endothelial dysfunction is an attractive target for these drugs beyond the treatment of ED. Sildenafil was approved for treatment of primary pulmonary hypertension in the United States in June 2005 [79].

The typical side effects of treatment are headache, flushing, and dizziness, which occur with all three drugs. Hypotension, orthostatic hypotension, and syncope are very rare events, as is priapism.

The different characteristics with respect to onset of effect and duration of effect can be used in therapeutic decision making according to the needs and wishes of the man and the couple [80].

It has become evident that the effectiveness of this therapy is increased if the medication is integrated into a comprehensive diagnostic and therapeutic concept as described above [81–83]. This integrated approach provides medical safety and psychological and couple-oriented efficacy. Reestablishing the quality of erection is then not only a physical and psychological help for the male but may also improve the quality of the sexual life of the female [84,85].

PE is a frequent single pathology or comorbidity with ED. The use of SSRIs in a behavioral treatment program as part of the integrated concept has proven to be effective and again brings a major amelioration to both men and women's sexual life [86].

The use of testosterone in aging men with HSDD and ED in the context of other signs of androgen deficiency becomes more and more an accepted therapeutic strategy; however, the fact that there is a lack of long-term data about possible health risks should be taken into consideration (cardiovascular and prostatic disease) [87,88].

Dehydroepiandrosterone sulfate (DHEA) has been used in both sexes and has shown variable and controversial results on sexual desire and sexual function [89]. It is to be considered as a prodrug that is converted mainly into testosterone, which may then be transformed into estrogen. The individual variability of these pathways seems to be high and unpredictable. Furthermore, until now, there is no licensed drug available and the preparations used are not standardized. Therefore, the use of DHEA is still under investigation and results of future studies will have to be awaited.

Drugs acting on the central nervous system such as apomorphin [90] and bremelanotide in both gender, bupropion in women [91] and new preparations such as flibanserin are under investigation to see their effectiveness, especially in desire and arousal disorders.

The Woman, the Man, and the Couple (Psychotherapeutic Interventions)

Combined with these biomedical interventions, psychotherapeutic and psychosocial interventions have to be reviewed together with the couple.

The spectrum reaches from individual body and fantasy-centered approaches [92,93] such as body awareness and masturbation exercises, sex toys, erotic videos to couple-oriented interventions which combine the classical sensate focus technique by Masters and Johnson [94,95], with different psychotherapeutic approaches (psychodynamic, cognitive–behavioral and systemic)

A special psychotherapeutic approach to elderly couples has been proposed and developed by different authors. There are some common concepts in these approaches:

One of the basic elements of the psychotherapeutic interventions is to help the couple to create awareness of the blockages and destructive interventions which hinder desired change and to replace these patterns by either more effective repair mechanisms or new patterns of communication.

A second common element is the importance given to activate the resources and experiences both partners have. It is not so much the disclosure of defects, deficits, and weaknesses, but much more the support of individual strengths and shared experience and history.

Finally, these approaches encourage the couples to learn about their own and the partner's often hidden sexual wishes and dreams, to express them, and to integrate them into a newly created sexual script [96,97].

Step 4. Shared Decision Making about Therapeutic Options

The presentation of the possible different therapeutic interventions must then be followed by a shared decision making leading to the choice of one ore more therapies. This step is very important because it permits not only the integration of step 1 (Therapeutic objectives), but it allows also the adaptation of possible options to the needs, the values, and the possibilities of the couples. The physician's view on therapies, their effectiveness, and appropriateness may differ considerably from what the couple feels and thinks and this should be made transparent and discussed (see Figure 3). The result of this process among our 16 couples is shown in Table 8.

Step 5. Evaluation

The couples are invited to come to control visits to discuss the degree to which the therapeutic objectives were achieved. Evaluation focuses on the following parameters:

Match with individual therapeutic objectives in

- Intimacy, closeness.
- Physical contact (pleasure, frequency).
- Couple interaction and communication;
- Sexual domains (motivation, arousal, orgasm, pain).

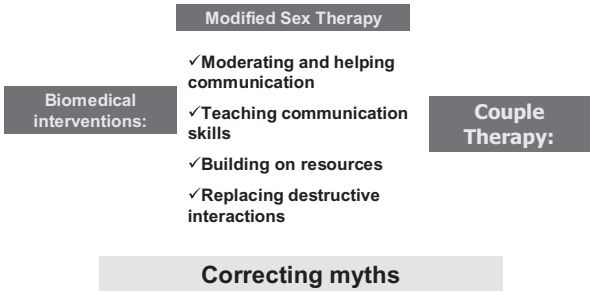

Figure 3 The therapeutic concept—a plan of combined interventions.

In our sample, the most important positive changes occurred in the field of couple interaction and communication. Twelve out of 16 couples reported that the sessions had helped them to communicate better about sexuality and that they appreciated very much the opportunity to talk to each other with the help of a physician. Eight of the couples reported that there was more physical contact between them. Symptom amelioration was most prominent in the men with ED. Ten out of 12 reported that their ED had improved, while PE responded less successfully to treatment (six patients reported that they felt more in control). Motivation for sexual activity and pleasure increased in seven couples. Four couples decided, after diagnostic workup and counseling, that they did not want to restart sexual activity but they enjoyed being close to each other.

Discussion

The demographic development shows an important shift towards older age groups. This brings up new challenges for medical research and medical care. Part of these new challenges are issues regarding sexual activity, sexual function and dysfunction, sexual satisfaction, and the impact of sexuality on the health and the quality of life of the elderly. For the moment, little is known about sexuality among older persons. The main body of data stems from surveys in the United States and to a lesser degree from Scandinavia [14,98]. The quantification of personal distress, the burden and diminution with respect to the quality of life, and the impact of sexual dysfunction on the health of the aging population are largely under-investigated.

Table 8 Therapeutic interventions

Biomedical interventions in the women of our sample	
Local estrogen	12
Systemic estrogen, progestogen	8
Testosterone gel or patch	3
Change of medication	2
Biomedical interventions in the men of our sample	
Phosphodiesterase type 5 inhibitors	15
SSRI	7
Different androgen preparations	5
Psychotherapeutic interventions in the couples	
Homework with books and videos	10
Use of sexual aids (Vibrator)	8
Modified sensate focus technique	10
Repeated psychoeducation and facilitation of communication (mean 4 sessions)	12
Systemic sexual therapy (mean 8 sessions)	8

SSRI = selective serotonin reuptake inhibitor.

Basic science research in psychophysiology, neuroendocrinology, and biomolecular medicine is needed to better understand the central nervous mechanisms and processes involved in desire and arousal and to increase the knowledge about the peripheral neurovascular and neuromuscular patterns and the neurotransmitters involved specifically in the elderly.

Evaluation of psychotherapeutic interventions in aging men and women is lacking and will be an important issue in the future.

Despite of these gaps, in our understanding, "a massive, and growing market for drugs and devices to treat sexual problems, target older adults" [14]. These therapeutic options, especially driven not only by the availability of drugs treating ED but also by the increasing importance of hormonal treatment and drugs targeting the central nervous system (CNS), contribute to an increasing demand for medical attention. This demand is further stressed by different facts: Sexual problems may be a warning sign of underlying illness such as vascular and metabolic, urogenital or even malignant diseases. Sexual side effects may diminish the compliance with necessary and important medications prescribed for the aging women and men. Sexual problems may lead to, or aggravate, affective disorders and be accompanied by isolation and withdrawal [14].

Until recently, few institutions offered a specialized program to take care of the sexual health needs of the elderly as there is a lack of training programs for general practitioners and all those in charge of the medical care of the aging population.

We propose a structured approach based on the biopsychosocial model which integrates biomedical, individual psychological, and systemic perspectives in diagnosis and therapy [99,100]. This model or tool can be used for establishing a program of care. At the same time, it is intended to

help in teaching those involved in the care of the elderly—how to address sexual problems, how to work out a comprehensive diagnosis, and how elaborate therapeutic interventions are, which are adapted to the specific conditions of the elderly woman, man, and the couple.

The program described above has several characteristics, which also can be seen as possible limitations:

- Multidisciplinary approach including gynecologists, urologists, internists, psychiatrists, psychologists, sexologists, and social workers.
- Communication, comprehension, and cooperation between physicians specialized in biomedicine and those specialized in mental health.
- Structured diagnostic workup and therapeutic planning by a case manager, who is chosen either by looking at the predominant medical problem and/or by applying the principle of the "first contact person" within the team.

These preconditions are at the same time possible drawbacks and negative aspects of the program. It may be very difficult or even impossible to motivate all specialists necessary to work in the field of sexual medicine. Another aspect is the costs involved if various specialists are concerned [101,102].

It seems necessary to adapt the program to the local conditions and possibilities. A limited team of physicians specialized in sexual medicine can be the principal caregivers who ask for advice from the various specialists at different decision-making points of the process.

Conclusion

Sexual health is an important part of the general health, also in aging men and women. Sexual health is determined by a complex interaction of biological, psychological, and sociocultural factors of the individual partners and their sexual and intimate interaction in the relationship.

Empirical evidence shows that the prevalence of sexual disorders, problems, and difficulties is quite high with a large variability in the degree of individual distress or relationship difficulties, which is reflected in a large variety of help-seeking behavior in different social and cultural groups.

Helping individuals and couples needs an expertise in sexological classification, biopsychosocial assessment of the individual patients, and an understanding of the couple's interaction and dynamics. Applying this comprehensive diagnostic concept will help to differentiate the sexual symptoms and to delineate their pathogenetic pathways and contributing factors.

Various therapeutic strategies are now available, all of them should be applied in the framework of a comprehensive therapeutic concept. This concept includes basic counseling, information and correction of myths about sexuality in the aging population, discussion of sexual scripts and therapeutic objectives for all patients, and individualized combinations of biomedical and psychosocial interventions, which should be tailored to the individual couple's needs, values, and clinical condition.

Biomedical interventions including the systemic use of estrogen, progestogen, and androgens in women with HSDD and arousal disorder, taking into account absolute and relative contraindications; tibolone in women with HSDD; PDE5 mainly in men with ED (in same cases of androgen deficiency symptoms in men combined with testosterone) but also in some physical arousal disorders in women; possibly the use of DHEA in both sexes; and drugs acting on the central nervous system such as apomorphin, bremelanotide, flibanserin, and bupropion are being investigated for future use.

Psychosocial interventions reach from individual body awareness and fantasy-centered exercises to couple-oriented systemic interventions which incorporate frequently the whole concept or various aspects of Master's and Johnson's sensate focus technique.

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