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Factors affecting sexuality of elderly people and sexual dysfunctions

Kamila Fronc, Faculty of Health Sciences, Department and Clinic of Geriatrics, Collegium Medicum Nicolaus Copernicus University, 85-067 Poland, kamila.fronc1998@gmail.com, ORCID: 0000-0001-9234-6890

Patrycja Zielińska, Faculty of Health Sciences, Department and Clinic of Geriatrics, Collegium Medicum Nicolaus Copernicus University, 85-067 Poland, patrycja.zielinska9318@gmail.com, ORCID: 0000-0002-9271-1162

Kornelia Kędziora-Kornatowska, Faculty of Health Sciences, Department and Clinic of Geriatrics, Collegium Medicum Nicolaus Copernicus University, 85-067 Poland, kornelia.kornatowska@cm.umk.pl, ORCID: 0000-0003-4777-5252

Abstract

Introduction: Sexuality of elderly people is often an omitted topic. There isn't a compact definition of sexuality of seniors. The available data shows that there are many factors influencing sexual activity in later life. There are also specific changes which contribute sexual dysfunctions.

Purpose: The aim of present is to investigate what factors are related with decreased sexual activity of seniors, biological basis of sexual dysfunctions and how many elderly people it affects.

Materials and methods: There were analyzed publications from 2007 to 2022 from PubMed and Google Scholar using phrases: older adults, elderly people, sexuality of elderly people, factors influencing sexuality, sexual dysfunctions.

The state of knowledge: Almost half of people above 60 years old are sexually active. There are factors like low availability of partner, stereotypes, chronic diseases and treatments that contribute worse quality of sexual life. There are reports that communication between doctor and patient on the topic of sexuality is not sufficient, even more positive attitudes towards sexuality of seniors. Biological changes like lower hormone levels in women as well as in men contribute sexual dysfunctions. There are almost one in five women above 57 years old who feel pain during intercourse and there are about 43% of men above 65 with erectile problems. The awareness of sexual dysfunctions could make it easier to treat them.

Conclusions: It is essential to pay attention to psychological, social, cultural and attitudes of health professionals towards sexuality of elderly people to diagnose sexual dysfunctions.

Understanding biological basis of sexual dysfunction can facilitate matching appropriate treatment. Education can improve seniors's quality of life and sexual functions.

Key words: sexual activity; elderly people; sexual dysfunction.

Introduction

Sexual health is a part of whole well-being of human. It affects physical, emotional, mental and social areas. Life expectancy has increased and reveals new problems in geriatrics population like decrease in the quality of sexual life and sexual dysfunctions. Recent research shows that sexual activity is very important for older adults and correlates with greater enjoyment of life[1].

The World Health Organization determines sexuality as "(...) a central aspect of being human throughout life and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction"[2]. There isn't a consistent definition of sexuality of the older population so far, what could be a disparity while comparing multiple studies[3]. In various studies there are different understandings of sexuality; some of them has an implicit definition which consider wide range of topics like desire, passion, physical intimacy, sexual satisfaction, pleasure, emotions, orientation and are used more frequently; some of them has an explicit definition which often contains sexual expression and behavior, physical intimacy and partnered activities[3]. It is known the sexual activity is a significant part of sexuality and many of studies show that with aging it decreased[4,5]. A lot of articles have a different age range in their definition of elderly population; there are considered people above 50, 55 or 60 years old, so it also can make a difference in analyzing studies[4,5,6].

There are many aspects which affect sexual activity in later life like health status, stereotypes, cultural aspects or partner availability[7,8]. There are also some natural hormonal changes in women like lower estrogen and progesterone production after menopause and in men like androgen deficiency[9,10]. Those and other factors relating to aging cause sexual dysfunctions to female as dyspareunia, vaginal atrophy, vulvodynia, orgasmic disorder and to male as impotence, ejaculation dysfunction[10,11,12]. Chronic diseases especially hypertension, diabetes, cancers, chronic respiratory diseases and medications used to cure them could affect sexual activity and quality of life[13,14]. However it doesn't mean that elderly people are asexual. According to the recent studies on large population about 46% people over 60 years old are sexually active and surprisingly 10% of people over 90 years are still sexually active[4]. A Belgian study shows that every third person over 70 years old is sexually active[15]. What's more, despite decreasing sexual activity with aging, about 77% people are sexually satisfied[4]. Actually, those researches reveal that elderly people are sexual people. But despite promising improvement in perception of sexuality of older adults by physician, there are still some barriers in seeking help with sexual problems[16,17]. Sexual life of elderly people is sensitive topic, therefore it will be analyzed what factors affect it and what are biological causes of sexual dysfunctions, depending on gender. The aim of the present is to investigate sexual activity in older adults population, related problems and their causes.

Factors affecting sexuality of older women

There are about 40% sexually active women above 60 years old, moreover about 84% of women above 60 years old are sexually satisfied[4]. It is essential to consider, what can influence on sexual life of elderly women. Actually, women live longer than men and there are many couples with a big age difference between man and woman, so there are a lot of women living in widowhood, moreover there are more than two women in the US for every man above 85 years old[18,19]. It makes women to be less sexual active, when their partner die[19].

Despite more awareness about sexuality, there is a huge impact of stereotypes on sexuality. For instance, some elderly women often accept their sexual dysfunction and don't do anything to improve it, because they think it is typical for older people to not have a intercourse[8]. Women with low education, low incomes and religious commitment are less sexually active in elderly age[7,20]. For instance about 64,2% of women Iranian women think that sex after menopause is embarrassing and about 66,2% think believe that it is unacceptable in their culture to have a sex in later life[21]. Women also feel less sexual desire, because of gender and age stereotypes, they can feel no more attractive comparing to young women[8]. In surveys, women are more often underestimate their sexual activity, therefore sometimes it could be incommensurable when young person asks the older women about sexuality[7].

Issue to be considered is the generation differences. The generation of 1970s, when the sexual revolution had come, is the old one now. It made present older people more courageous and less ashamed of their sexual desires[7]. There is also a different attitude towards traditional ideals where pleasure of men has a main role[8], so women's desires are more noticeable.

There are also wide range of sexual behaviours noticed not only penetration, but also kissing, hugging and petting and masturbation[6,22]. Those alternatives are good for partners, give them satisfaction and help to maintain an intimate relationship. Moreover, the latest studies report that 40% of norwegian, 36% of belgian and 31% of Danes women above 60 years old have masturbation activity in the last month[22].

Furthermore, there is a large influence of health care on diagnosis and treatment sexual dysfunctions of older women. Sexuality is sensitive and problematic topic, so there are some barriers, which interfere with communication with doctors. In Gore-Goroszewska's study, women admitted that it is easier to talk about sex with female researcher[16]. However, there are many elderly people, who don't know other dysfunctions apart from erectile dysfunction[16]. Moreover, there were women, who had sexual dysfunctions as vaginal dryness when they were young and they treat it as a normal part of sexual functioning[16]. Some study show that there is positive improvement in talking about sexual dysfunction by physicians with older patients[17], but actually it is still not at good level. There are elderly people, who are afraid of doctor's disapproval, because of unpleasant experiences with seeking help; there were doctors, who considered sexual problems to be less crucial[16]. Asking elderly women directly about sexual problems made more women report them[23]. 20,5% women, aged 55-74, who participate in survey about sexuality in Great Britain sought help with their sexual problems. As the older adults notice their sexual problems, they don't know where they can find help[16]. Survey in Białystok shows that women have lower knowledge about sexuality in later life than men[24]. Literally, sexual dysfunctions could be symptoms of serious diseases and sexual education for elderly people is needed and it could improve well-being of patients and quality of life[7,17,23].

Good self-assessment of health is one of factor which impact sexual activity and satisfaction[4]. In the study on large group, one of the six women aged 55-74 reported health status or taking medication, that have an impact on sexual activity[6]. Obesity, that occurs frequently after menopause may contribute reduction of sexual satisfaction, arousal problem, dyspareunia[25]. Cardiovascular disease is associated with lower libido, vaginal drynesses and decreased orgasms and medications used in those illnesses like beta-blockers, diuretics can also intensify those sexual dysfunctions[13]. There are 33% women aged 57-85 with diagnosed diabetes, which are sexually active according to the study on representative group[26]. Furthermore, women with diabetes are more likely to talk about sex with physician than women without diagnosed diabetes[26]. There is also an impact of cancers and chronic kidney diseases on sexual dysfunction[13,27]. Actually, there is an impact of

depression, other mental illnesses and drugs used to treat it. For instance, there are women, who received fluoxetine to cure obsessive-compulsive disorder don't have an improvement in desire, arousal and orgasm, however those women who received cognitive-behavioral therapy have convincing progress in those areas[27]. Parkinson disease has an influence on sexual dysfunction and during treatment, it can induce compulsive sexual behavior to 0,5% of women[28].

Information about sexual dysfunction in older women

Sexual dysfunction in books is described as i.e. sexual dysfunctions characterized by frequent and repeated inability to participate in sexual interactions according to the person's desires, lasting for an extended (many months) period. There are different divisions of dysfunction depending on the phase of the sexual reaction cycle in which they occur. The problems listed below may be related to a variety of serious diseases, but are often related to the physiological changes that occur in a woman's body. Sexual dysfunctions in the group of older women are associated with physiological processes and the natural aging of the body. The ovaries, which are responsible for the production of estrogens during the menopause, produce less and less hormones, leads to hypoestrogenism[29,30]. It is a physiological condition that occurs naturally in aging women. Problem occurs when that kind of dysfunction leads to avoid sex. One large study shows that as many as 30.5% of women aged 65-74 and as many as 22.7% of women aged 75-85 avoid sexual activity because of sexual problems[30]. The most common problems among older women are problems with vaginal lubrication, pain during intercourse, and the inability to achieve orgasm[30].

Vaginal atrophy

With age, the production of estrogens, which are responsible for the proper functioning of the vaginal epithelium, decreases in women[31]. It is very important for one of the most common dysfunctions associated with hypoestrogenism is vaginal atrophy[30]. The endothelium of the vaginal and vulvar walls is lined with cells that contain estrogen receptors which react to estrogens and make the mucosa elastic and moisturized. The lowered concentration of estrogen hormones leads to a change in the arrangement of collagen fibers and the destruction of elastin fibers and the reduction of blood supply in the vulvovaginal mucosa[32]. The lower level of estrogen leads to thinning of epithelial cells and thinning of the epithelium[11]. Vaginal atrophy can occur with any woman, regardless of age[11]. Symptoms that accompany vulvovaginal atrophy include itching, burning, pain during intercourse, dyspareunia, and disturbed microflora, which increases the risk of infections[11,33]. The symptoms of vulvovaginal atrophy also occur in other diseases such as lichen planus, psoriasis, lichen sclerosus, allergies or vulvar cancer[11]. One study on sexual dysfunction of people of different ages showed that 43.2% of women aged 65-74 have a problem with vaginal dryness, while in the group of women aged 75-85, this percentage is 43.6%[30]. This is much more than, for example, in the group of women aged 57-64, where this result is 35.9%[30]. In medical practice, the diagnosis is made on the basis of a personal and physical examination, having previously ruled out other problems. A number of symptoms that suggest vaginal atrophy are pain during intercourse, urge to urinate, irritable vaginas, and discomfort during vaginal intercourse[34].

Part about dyspareunia

Another dysfunction in elderly women is dyspareunia. Avoidance of sex because of sexual problems is common in people at different age and it depends on how many problems they have and how their physical health is[30]. It is also one of the concerns of vaginal atrophy. Pain during intercourse occurs in women of all ages, it is often a physiological condition, but it can also be related to the medications taken, e.g. women undergoing chemotherapy often suffer from dyspareunia[11,30]. Dyspareunia is described as pain during vaginal intercourse and is more common in postmenopausal women and by genital pain that

can be experienced before, during, or after intercourse[35,36]. Painful sex could be caused by infections, endometriosis and vulval skin condition[36]. In one study on the sensuality of the elderly, results indicate that pain during intercourse is one of the sexual problems in postmenopausal women. In the group of women aged 57-64, pain occurs in 17.8% of women, while in the group of women aged 65-74 in 18.6% of women[30]. Pain during intercourse is associated with vaginal atrophy, but also with a number of other processes that take place in the body of an aging woman. Pain related to sexual intercourse (dyspareunia) is provoked vulvodinia when other causes have been excluded[37,38].

Part about inability in climax

Another very important problem among older women is the inability to climax[30]. In the group of women aged 65-74 it is 32.8%, while in the group of women aged 75-85 it is 38.2%[30]. Orgasm is a series of processes that take place in a woman's body, leading to the experience of momentary pleasure and sexual satisfaction[39]. Orgasm in women is a more complex physiological process than orgasm in men. Women may experience less intense orgasms, which may be due to reduced blood flow through the organs, which is related to the physiological changes taking place in the body. The quality of orgasm is also influenced by anatomical factors, such as the structure of the clitoris and the distance between the clitoris and the opening of the urethra, as well as the sensitization of the vaginal wall[34]. Additionally, diabetes is a factor that leads to disorders in the vascular endothelium that affect the blood supply to the genitals but also gynecologic conditions[40].

	Factors influencing sexuality	Suggested solution/treatment
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	Gender and age stereotypes, low knowledge about sexuality	Sex education
	Reluctance to ask the doctor about sexual problems	Creating specific surveys for older adults about their sexuality, more frequent questions about sexuality in physician's office
	Obesity	Well-balanced diet, physical activity
	Communication barriers	Courses in communication with elderly
	Vaginal atrophy	Lubricants, vaginal estradiol creams, estrogen replacement therapy
	Dyspareunia	Treatment depends on the cause (most often treatment of vaginal atrophy)
	Inability in climax	Improvement of physical condition, psychotherapy
	Hypoestrogenism and decreased libido	Estrogen replacement therapy, selective estrogen receptor modulators, phosphodiesterase inhibitors
Elderly men	Age stereotypes, lack of knowledge	Sex education
	Erectile dysfunctions (impossible intercourse with penetration)	Alternatives like hugging, kissing, oral sex, touching
	Obesity, smoking	Lifestyle modification, physical activity
	Treatment of hypertension, depression	If it possible, using treatments that don't affect erectile function
	Inability to achieve erection	Change in lifestyle, pharmacological treatment (phosphodiesterase inhibitors)
	Problems with ejaculation and orgasmic dysfunction	Improvement of lifestyle, treatment depends on the cause
	Hypoestrogenism	Hormone therapy with testosterone

Table 1. Selected factors and sexual dysfunctions affecting sexuality of elderly women and men and suggested methods of solution/treatment.

Factors affecting sexuality of elderly men

According to study 55% men aged 60-96 are sexually active and 69% men are sexually satisfied[4]. Lower sexual satisfaction compared to women could arise from higher expectations to be sexually available as younger men[4]. Despite men are more sexually active than women, men are more susceptible to aging sexual stigma beliefs[41]. There are some similar stereotypes to women, but also another like erectile dysfunction is symptom of weakness and therefore men could arise their sexual activity in reports[7].

Men frequently connect sexual activity with penetration and when erection dysfunction appears, sexual life in partnership often disappears. However, there are some reports that elderly people look for alternatives like hugging and kissing and it improves satisfaction in their sexual life[6]. Admittedly there are 65% norwegian men aged 60-75, 57% belgian men and 53% Dunes and 41% portugal men, who have masturbation activity in the last month[22]. Moreover, men with depression have more episodes of masturbation, which could give them-self relief[22]. There is a cultural differentiation: older men from Norway and Denmark with higher education are more likely to masturbate than men with higher education in Portugal[22]. This may be due to portuguese more religious and traditional approach to sex.

In addition, it is worth to pay attention to male patient when he comes to see the doctor, because it is not easy to initiate a conversation about sexual problems. Elderly men more often ask health care professional about sexual dysfunctions than women, but one study on large group show that 28,1% of men aged 55-74 was seeking help with their sexual issues[6,23]. Not only women, but also men feel embarrassed, ashamed, uncomfortable to talk about sexuality with physicians[16,23]. Older adults think that doctors will be uninterested with their problems or they consider them as trivial due to their other health problems[16,23]. According to the study, there are 33,1% older men aged 55-74, who take sildenafil to improve their sexual functions and it is the most common help given to elderly men with erectile dysfunction[6]. Actually there is an ageism problem, where physicians most often consider biological treatment for older adults and don't take into account psychological and social aspects[17]. Even though there is some evidence that healthcare professionals have a more positive attitude towards the sexuality of elderly, there are still many doctors who make them feel embarrassed and they don't know where they can find good advice, because of lack of knowledge and unavailability of specialists[16,17]. In one study, older men know more about sexuality and issues, however elderly people aren't informed and educated about risks of sexually transmitted infections and there is a low awareness about sexually transmitted infections in elderly people population[23,24,42].

Furthermore, health status is a factor which influence on elderly men sexual activity. Men aged 55-74 with chronic diseases, higher Body Mass Index, long standing illness and disability announced that their health affected their sexual active and satisfaction, however there is a study, which shows that elderly men with low level of personal activities of daily living (PADL) were sexually active and there wasn't a difference between those men with high PADL [4,6]. Actually, there elderly men with cardiovascular diseases and it is known that beta-blockers, diuretics have lower libido and erection dysfunctions, so some of older men don't take drugs to prevent sexual dysfunction, but men with good control of hypertension reported better erection[13,43]. What is more, obesity and smoking over 20 pack-years are modifying factors, which influence worse erection[43]. Moreover there is correlation between chronic obstructive pulmonary disease and erectile dysfunctions[13]. More than 50% of men with diabetes have erectile dysfunction, but there are reports that treatment of diabetes with metformin could improve erectile dysfunction, because of better endothelium-dependent vasodilatation[44,45]. Moreover, in urinary tract diseases like chronic kidney diseases occur in 70-80% male patients who have erectile dysfunctions. There is also reported decreased libido, inability to erection, delayed ejaculation in Parkinson disease, but while treating by

levodopa there could appear compulsive sexual behaviour to 5,2% male patients[28]. There should be mentioned depression like one of the disorder, which affect sexual health in geriatric population. Men aged more than 50 with depression have worse sexual satisfaction, decreased erection and more symptoms of depression, but there appear also iatrogenically induced sexual dysfunctions by selective serotonin reuptake inhibitors[13,46,47]. There are alternatives drugs which don't affect sexual functions like mirtazapine, bupropion, vilazodone, vortioxetine and serotonin-norepinephrine reuptake inhibitors[47].

Sexual dysfunction in men

Sexual dysfunctions in older men are mainly associated with erectile dysfunction and the inability to climax[30]. Erectile dysfunction in older men is the most common chronic sexual dysfunction associated with the physiological aging of the body, as well as with comorbidities[48]. Studies have shown that metabolic diseases, the prevalence of which increases with age, are associated with the occurrence of erectile dysfunction. The presence of the correct endothelium lining the cavernous arteries and venous vessels directly affects the erection process. Hypogonadism, which is characterized by a reduced level of testosterone in the blood serum and a set of clinical symptoms, also contributes to erectile dysfunction in older men[49]. Other symptoms of lowered steroid hormone levels are libido disorders, decreased muscle mass, increased obesity, depressed mood, osteopenia and osteoporosis[49]. The process related to sexual function in men does not have a single cause, and it is usually several related disorders. Problems with ejaculation and orgasmic dysfunction are not uncommon and the causes are complex and can lead to premature ejaculation to delayed ejaculation and anejaculation[30]. These processes affect the quality of orgasm and sexual satisfaction. Medical condition, psychological conditions, certain medical treatments, medications and older age is one of the factors that contribute to delayed ejaculation. As a result, men may have a problem with achieving sexual satisfaction and avoid sexual activity. Orgasm abnormalities can also be the result of decreased testosterone levels in the blood of an aging man.

Problems with erection

Erectile dysfunction is defined as the inability to achieve or maintain an erection sufficient for satisfactory sexual performance[51]. Erectile dysfunction is most often associated with metabolic diseases that occur frequently in elderly men. The survey shows that as many as 44.6% of men aged 65-74 and 43.5% of men aged 75-85 have problems with achieving or maintaining erection[30]. The study was performed on a group of men who had had sex in the last 12 months. Changes in erection in the elderly male are largely related to the activity and lifestyle, as well as the patient's health, which is reflected in the structure and quality of the vascular endothelium[52]. The other survey shows that in the age group of men over 70, the incidence of erectile dysfunction was 77% compared to the group of men aged 40-69 where it was 61%[53].

The erection mechanism is based on the inflow of blood into the cavernous bodies of the penis and blocking its rapid outflow. The proper structure and function of the penile endothelium lining the vessels of the penis is related to the maintenance of the excision[54]. Research has shown that men with erectile dysfunction often suffer from organic disorder, and the most common is vascular disease[55]. High cholesterol and disturbances in the lipid metabolism affect the activation of the vascular endothelium, which disrupts the process of its proper function in erection[54]. An additional factor influencing erection are histological changes occurring within the corpus cavernosum, as well as a reduction in the number of penile muscle fibers and the disturbance of proper conduction in the cavernous nerves [50]. Treatment of erectile dysfunction consists in changing the lifestyle, i.e. stopping smoking, increasing physical activity and reducing body weight, as well as proper control of chronic

diseases. The first line of drugs is phosphodiesterase-5 inhibitors, while the second line is alprostadil. The mainstay of patient treatment is lifestyle change education, but other forms of sexual activity are also worth discussing.

Problems with ejaculation and orgasmic dysfunction

Dysfunctions related to ejaculation and orgasm disorders are also found in the male population of all ages[50]. Orgasm and ejaculation are different processes in terms of the physiological basis, but in fact their occurrence is related[56]. These disorders are divided into premature ejaculation, delayed ejaculation and anejaculation, as well as decreased orgasmic pleasure and anorgasmia. Older men are most likely to experience delayed ejaculation compared to younger men who are more likely to experience premature ejaculation. Despite the fact that it is a disorder that occurs in men and masks the basis of other dysfunctions, it is a problem whose causes are not fully understood. The problem associated with delaying ejaculation is dysfunction of the orgasm, which also occurs in the group of aging men[50]. The inability to achieve orgasm occurs in up to 33.2% of men aged 75-85, according to one study on the sexuality of elderly people in the United States[30]. The background of these problems is complex and includes hypogonadism, organic changes, but also chronic diseases, the frequency of which increases with age. In the group of men aged 65-74 it was 22.7%[30]. However, in the group of 57-64 years it was 16.2% of people[30]. This problem affects a larger group of men with age[30]. Treatment is not clear cut and sometimes depends on lifestyle changes.

Conclusions

People above 60 years old are nearly 46% sexually active. There are many factors influencing sexual activity as partner availability, gender and age stereotypes, cultural, psychological, social aspects, healthcare professionals attitudes and health status. Seniors have a wide definition of sexual activity, they are more open for other sexual behaviour, not only penetration. Attitudes towards older people's sexuality are more positive, but still require education. There are biological changes which contribute sexual dysfunctions as vaginal atrophy, dyspareunia, inability in climax in women, erectile, ejaculation and orgasmic dysfunctions in men and knowledge about them is needed to understand and treat the problem. Education and a multi specialist approach to the sexuality of elderly people could improve their sexual functions and quality of life.

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