

# Sexual Desire and Related Factors in Middle-Aged and Elderly Married Women: A Cross-Sectional Study in Iran

Mahbubeh Tabatabaeichehr<sup>1</sup>, Hamed Mortazavi<sup>2</sup>, Mahdi Hares Abadi<sup>3</sup>, Leili Moayed<sup>4\*</sup>

<sup>1</sup>Geriatric Care Research Center, Department of Midwifery, School of Nursing and Midwifery, North Khorasan University of Medical Sciences, Bojnurd, Iran; <sup>2</sup>Geriatric Care Research Center, Department of Geriatric Nursing, School of Nursing and Midwifery, North Khorasan University of Medical Sciences, Bojnurd, Iran; <sup>3</sup>Geriatric Care Research Center, Department of Nursing, School of Nursing and Midwifery, North Khorasan University of Medical Sciences, Bojnurd, Iran; <sup>4</sup>Student Research Committee, Gerontological Care Research Center, North Khorasan University of Medical Sciences, Bojnurd, Iran

## Abstract

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**\*Correspondence:** Leili Moayed. Student Research Committee, Gerontological Care Research Center, North Khorasan University of Medical Sciences, Bojnurd, Iran. E-mail: [Leili70.moayed@gmail.com](mailto:Leili70.moayed@gmail.com)

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**BACKGROUND:** The sexual desire in the middle-aged and senior women is one of the factors affecting their quality of life and psychological well-being.

**AIM:** The present study was aimed to assess the sexual desire and related factors among married women aged 50-70 years.

**MATERIALS AND METHODS:** In this descriptive-analytical study, 210 married menopausal women aged 50-70 years were selected by cluster sampling method. Data were collected using a demographic profile questionnaire and Sexual Desire Inventory (SDI), and analysed by SPSS version 22 software using descriptive statistics and independent t-test, ANOVA and Pearson correlation coefficient tests.

**RESULTS:** The mean age of women was  $59.40 \pm 5.93$  years, and the mean sexual desire score was  $22.66 \pm 17.78$  (out of 112). There was a significant relationship between sexual desire score and age, educational level, occupation of women and spouses, age of menopause, marital history, number of pregnancies and children, individual health and pain level ( $P < 0.001$ ). The sexual desire score had a significant association with diabetes, hypertension, heart disease, high cholesterol, chronic pain, gastrointestinal problems, chronic ulcers, bladder and intestinal problems, joint and bone disorders, taking cardiac medications, antihypertensive, anticoagulant, insulin, cholesterol-lowering drugs ( $P < 0.001$ ).

**CONCLUSION:** The low sexual desire score and its reduction with age and the presence of various diseases and factors affecting sexual desire highlight the importance of diagnostic screening, family related educational planning and the role of health care providers in the health status of the older adults.

## Introduction

Elderly is described as one of the most important periods of life that has been neglected. The changes in the physical appearance and the roles of older adults often led the community to forget that the older adults are not an isolated generation [1]. Health has a variety of dimensions, one of which is sexual health [2]. The World Health Organization (WHO) defines sexual health as "a state of physical, emotional, mental, and social well-being in relation to sexuality; it is not merely the absence of disease,

dysfunction or infirmity", but it is a relatively good sexual state requiring a positive approach to sexuality and sexual relationships and a pleasant experience without fear, shame and coercion [3]. Neglecting elderly people and their needs, such as sexuality, affects their quality of life and the feeling of being "good" [2] [4]. Sexual desire has been considered as one of the fundamental human needs, although this need goes beyond the biological realm and also has physiological, social and spiritual dimensions [2] [3]. The sexual desire can promote the growth of individual personality and relationship, and contribute to overall life stability, as well as provide opportunities

to access new advancements and gain experience. The sexual desire of the elderly people is in a challenge with a kind of indifference around the world because the culture of society and the general public does not acknowledge this need in elderly people and perceive sexual interests in elderly people as a deviant behavior [3] [5]. Sexual desire is not just for young people but it is one of the important dimensions of the lives of elderly people, especially those who had been sexually active throughout life. Despite decreasing sexual relationships with age, feeling of interest, need for intimacy, communicating and sexual desire remain strong among elderly populations and is a motivator for continuing and improving the quality of their life. The elderly people through meeting these needs can take more pleasure in their lives [6] [7] [8] [9]. Gott et al., found that despite the benefits of the sexual desire physically and psychologically, there are many barriers to the sexual desire for elderly people, as the most common cases are the absence of a sexual partner through death, divorce or illness and that the attitude of elderly towards the sexual desire is formed on the basis of the cultural and social context existing in the society and not based on their belief [10]. It has shown that women, compared to men, in the aging course are more concerned with cases such as the quality of the relationship or the rational health, among which the physiological factors of the relationship are more important to them and that the absence of the partner makes the elderly to seek alternative relationships [11] [12].

The results of a study showed that the sexual desire of older adults is extensively influenced by the emotional and physical satisfaction of the individual, as well as the length of the relationship between the elderly and spouse, has been reported to be an important issue. Moreover, the elderly following many years of life alongside the spouse can be sad because of death and is no longer involved with sex [7] [13]. The results of a study showed that the sexual desire enhances the need of the elderly to interact with each other and respect for the partner [14]. Moreover, it has been shown that attitude toward the sexual desire is heavily influenced by the beliefs and attitudes of the ancients. The ancients spoke less explicitly about the sexual desire as if sexual pleasure was only special for men at the time and the role of women was the only sexual satisfaction of husband or reproduction [3] [5].

According to the abovementioned introduction, the sexual desire has merged with personality and identity and plays an important role in adapting and improving the quality of life of the elderly.

Further, because the sexual desire is ignored in older adults and is affected by certain factors, the present study was conducted to investigate the sexual desire and its related factors among married women aged 50-70 years old who referred to Health centres in Sabzevar (Iran) in 2016.

## Materials and Methods

The present descriptive and analytical research was conducted on married menopausal women aged 50-70 years who met the inclusion criteria. The sample size was estimated to be 210 people using a pilot study and a sample size formula of  $n = \frac{Z^2 \cdot \alpha \cdot \delta^2}{d^2}$  at 95% confidence interval and 90% test power. After obtaining approval from the Ethics Committee of Bojnurd University of Medical Sciences, the samples were collected by systematic cluster sampling method. Thus, first, the city of Sabzevar was divided into four main clusters based on the statistics of households with married women aged 50-70 years, the sample size was then calculated systematically in each health centre, and some medical cases were randomly selected at each centre. The female researcher referred to their address given in the case, and the sample was selected based on the criteria listed in the sample selection checklist after completing the informed consent form and measuring blood pressure and blood glucose (to gain the trust of cooperation).

Exclusion criteria included the absence of depression and psychological illness known in the individual and the spouse, the absence of any physical, mental and motor disabilities, the lack of physical constraints and dependence of physical movement of women and spouses in the daily activities, no history of oophorectomy, hysterectomy and mastectomy in women, and no history of prostatectomy in a spouse. Before interviewing and completing the questionnaires, people were given explanations about the confidentiality of the information, the objectives and methods of study as well as how to answer the questions, in the condition that people had a mental readiness to answer the questions.

Data were collected using a demographic profile and SDI questionnaires. Demographic information questionnaire included a general profile of women and spouses (age, occupation and educational level), characteristics of marital life (menopause age, years of marriage, number of pregnancies and number of children), and questions on underlying diseases, drug use, and health status of the individuals. The validity and reliability of SDI were used by Tracee and Moore in a study on older adults, whose validity was confirmed by content validity and whose reliability by Cronbach's alpha of 0.86 [15]. The questionnaire consisted of 14 questions, including nine items for the sexual desire for the interpersonal relationship, four items for assessing the individual sexual desire and one question for any sexual desire in the individual. For questions 1, 2, 10 and 14, the respondent needed to select one out of eight options available. A number must be selected for other questions on an 8-point Likert scale as 0 (= 'not at all')

means no sexual desire and 7 (= 'more than once a day') means the maximal sexual desire. The final score of the questionnaire was calculated by adding scores, giving a maximum score of 112. For each question, the respondents were asked to choose which of the options is most similar to their thoughts and feelings of interest and desire for sexual activity in the last month.

The content validity method was used to verify the validity of the questionnaires. Thus, this form was set by studying the latest references in the field of research under the supervision of the supervisor and then introduced to 10 experts including the supervisor, consultants and faculty members of the Faculty of Nursing Midwifery at the Bojnurd University of Medical Sciences. The questionnaire was utilised after including the suggestions and amendments necessary to ensure its comprehensiveness.

The reliability of the questionnaire was confirmed by Cronbach's alpha ( $r = 0.91$ ). At last, the descriptive statistics were used to describe the demographic variables using mean, standard deviation, frequency and percentage. The independent t-test was used to investigate the relationship between sexual desire score and disease and to compare the mean sexual desire scores in two age groups under 60 years and over 60 years; the analysis of variance (ANOVA) test to compare the sexual desire score for multivariate variables; Pearson correlation test to examine the relationship between quantitative variables such as the relationship between sexual desire and age of menopause, marital history, number of pregnancies and number of children according to the normal distribution of data. All data were analysed by SPSS version 22 software.

## Results

The present study was conducted on 210 married women aged 50-70 years. The mean age of women was  $59.40 \pm 5.93$  years. These women were mostly housewives (61%), and most of them (41%) had the education level of high school. The age of menopause, marital history, number of pregnancies and number of children are listed in Table 1.

**Table 1: Demographic variables of research units**

Age (Mean $\pm$ SD)		59.40 $\pm$ 5.93
Age of menopause (Mean $\pm$ SD)		50.3 $\pm$ 3.25
Years of marriage (Mean $\pm$ SD)		38.51 $\pm$ 7.74
Number of pregnancies (Mean $\pm$ SD)		4.29 $\pm$ 2.20
Number of children (Mean $\pm$ SD)		3.74 $\pm$ 1.63
Occupation/employment status Number (percent)	Full-time	1 (0.5)
	Part-time	31 (14.8)
	Retiree	50 (23.8)
	Housekeeper	128 (61)
	Illiterate	18 (8.6)
Educational level Number (percent)	<High school	56 (26.7)
	High school	86 (41.0)
	Associate's degree	34 (16.2)
	Bachelor's degree and higher	16 (7.6)

The mean sexual desire score of women was  $22.66 \pm 17.78$ ; the comparison of sexual desire score at middle-aged and elderly subjects showed a significant relationship between these two age groups (Table 2).

**Table 2: Comparison of the mean sexual desire score in the two age groups of less and more than 60 years**

Groups	Frequency	Mean score	Standard deviation	F	P
< 60 years	104	30.37	18.54	6.85	0.000
> 60 years	106	15.10	13.20		
Total	210	22.66	17.78		

The underlying diseases were diabetes (53.3%), hypertension (56.7%), heart disease (13.9%), high cholesterol (21.9%), chronic pain (40%), gastrointestinal problems (33.8%), chronic ulcer (8.1%), bladder and intestinal problems (25.2%), joint and bone problems (42.9%) and urinary tract infection (9%). The used medications were anti-hypertensive (42.4%), anticoagulant (21.4%), insulin (20.5%), cholesterol-lowering (38.6%) and cardiac (21.9%). The household income level in the majority of participants (48.1%) was between 10 and 20 million Rials per month. The description of most participants (42.4%) of their health status was in the "good" cluster. Most participants (30%) reported mild pain in the last four weeks. The results of Pearson correlation coefficient showed a negative and significant correlation of the sexual desire score with age of menopause, years of marriage, number of pregnancies and number of children (Table 3).

**Table 3: Relationship of the sexual desire score with age of menopause, years of marriage, number of pregnancies and number of children**

Variables	Pearson correlation coefficient	P value
Age of menopause	-0.16	0.01
Years of marriage	-0.43	0.00
Number of pregnancies	-0.37	0.00
Number of children	-0.38	0.00

It was also found that there was a significant difference between the sexual desire score of women with age ( $p = 0.00$ ), educational level ( $p = 0.03$ ), spouse's education ( $p = 0.02$ ), spouse's age ( $p = 0.000$ ), spouse's occupation ( $p = 0.000$ ), diabetes mellitus ( $p = 0.000$ ,  $t = 5.51$ ), hypertension ( $p = 0.0005$ ,  $t = 5.64$ ), heart disease ( $p = 0.00$  and  $t = 3.78$ ), high cholesterol ( $p = 0.00$ ,  $t = 6.69$ ), chronic pain ( $p = 0.005$  and  $t = 5.80$ ), gastrointestinal problems ( $p = 0.00$ ,  $t = 4.56$ ), chronic ulcer ( $p = 0.00$ ,  $t = 4.66$ ), bladder/intestinal problems ( $p = 0.00$ ,  $t = 4.90$ ), joint and bone problems ( $p = 0.00$  and  $t = 3.69$ ), taking anti-hypertensive ( $p = 0.000$  and  $t = 5.61$ ), anticoagulants ( $p = 0.000$ ,  $t = 3.91$ ), insulin ( $p = 0.000$  and  $t = -4.2$ ), cholesterol-lowering ( $p = 0.000$ ,  $t = 6.16$ ), and cardiac ( $p = 0.000$  and  $t = 4.03$ ), the individual description of health status ( $p = 0.00$ ) and the pain level in the last four weeks ( $p = 0.00$ ). The results of this study showed that there was no

significant relationship between the sexual desire score and occupation of women ( $p = 0.3$ ), household income level ( $p = 0.07$ ) and urinary tract infection ( $p = 0.06$  and  $t = 1.87$ ).

## Discussion

According to the present findings, the sexual desire among middle-aged women was almost twice as high as senior women. In a study on the elderly in the United States [15] using the same tool, the mean sexual desire score was reported to be higher than that of our study. Delamater et al. also reported a decrease in the sexual desire level in both women and men. Meanwhile, the mean sexual desire in men was more than in women [16]. In a study Beigi et al., on sexual dysfunction in menopause, the sexual desire dysfunction was 62.6% in postmenopausal women [17].

Similarly, da Silva et al., in a review study found that 60-year-old women had sexual dysfunction in different dimensions in comparison with 30-year-old women and 72.2% of postmenopausal women were involved in sexual activities merely because of their thousand's satisfaction, and they were unwilling to participate in these activities [18]. Sheikhan et al. concluded that 66.3% of postmenopausal women had undesirable sexual desire level [19]. A review study of Palacios et al. revealed that the sexual function was strongly influenced by age so that the incidence rate of sexual dysfunction increased from 10% in women aged 49 years to 22% in women aged 50-65 years [20]. The sexual desire was decreased in postmenopausal women to 47% in the UK, 54% in Italy, 42% in France and 24% in Germany [5] [15], while Leiblum et al., in the US reported that 62% of women believed in enhanced sexual desire after menopause [21]. With the ageing of postmenopausal women in traditional societies, they often tend to be involved in caring for children, descendants and religious during this period, and the sexual activity is in their next priorities [22]; these results were different from those obtained from some other developed societies [23] [24]. In the review study, Palacios et al. found that the sexual function was strongly influenced by age so that the incidence rate of sexual dysfunction increased from 10% in women aged 49 years to 22% in women aged 50-65 years [20].

The sexual response, the sexual desire and the frequency of sexual intercourse in menopause are decreased with age, leading to the sexual dysfunction in women. This can be an important factor in reducing sexual function in postmenopausal women [25]. Ponholzer et al., examined the risk factors and the prevalence of sexual dysfunction in 703 Australian women and found that 22% suffered from sexual desire disorder, 35% had a sexual arousal disorder,

and 39% expressed orgasmic problems; all of these problems had been significantly increased with age [26].

The results of this study showed that despite the high mean sexual desire score in employed women (full time), there was no significant relationship between the sexual desire score and the occupation of women. Further, the results of a study on 846 women aged 40-60 years in Maryland (USA) [27] confirmed the results of our study. In a study, employed women had the sexual desire higher than homemakers, which could also affect the sexual satisfaction [28]. The results of this study showed a significant relationship between the sexual desire score and the educational level of women. The women who had a Bachelor's degree and higher revealed higher mean sexual desire score.

Other studies showed that female sexual function is reduced by increasing educational level [29] [30]. In the current study, there was no significant relationship between female sexual desire score and household income level, although it was close to the significance level. However, the lowest mean sexual desire score was related to the household income level "below 10 million Rials". It has been shown that sexual function score was significantly higher in women who had an adequate household income level [23] [17], but Tomic et al., in Maryland reported that the household income level was not a predictor of sexual function in middle-aged women [27]. In the present study, there was a significant relationship between the sexual desire score of women and spouse's occupation, and the highest sexual desire score of women belonged to the group whose spouses worked "full time" and the lowest sexual desire score was seen in the group of women whose husbands were "unemployed". Sheikhan et al., [19] and Valadares et al., [29] both reported that the postmenopausal women whose husbands were self-employed had more sexual arousal.

This can be attributed to the fact that the adequate income provides peace of mind and subsequently sexual satisfaction [19] [31]. There was a significant relationship between the sexual desire score of women and the educational level of the spouses. The women whose spouses had the associate's degree had the highest mean sexual desire score. In the study of Sheikhan, there was also a significant relationship between the sexual arousal and the educational level of the spouses, as Gonzalez et al., confirmed this finding [19] [30]. The results of this study indicated a negative relationship between the sexual desire score of women and age of menopause, marital history, number of pregnancies and number of children. In a study of Gutbrie et al., which lasted nine years, it was found that the sexual dysfunction increased from 42% to 88% from the beginning to the latter phase of the menopausal transition possibly due to a sharp drop in the sexual hormones [32]. It has been reported that the overall

sexual function decreased from 88% in the first year after menopause to 34% after eight years of menopause [18]. On the other hand, the sexual response in the postmenopausal women is more likely to result from the need for intimacy than the sexual arousal [25]. However, some studies have claimed that the marriage does not affect women's quality of life [33].

The results of this study revealed that the sexual desire score in women had a significant association with diabetes, hypertension, heart disease, high cholesterol, chronic pain, gastrointestinal problems, chronic ulcers, bladder and intestinal problems, and joint and bone disorders. No significant relationship was found between the sexual desire score and the urinary tract infection, although close to the significance level, due to the small sample size. In a study female sexual function was affected by some conditions including cancer, high cholesterol, chronic ulcer care, bladder and intestinal problems, diabetes, poor vision, gastrointestinal problems, hypertension, major surgery, joint and bone problems, and general health status [31]. DeLamater et al. underlined that the older adults with hypertension have, the lower sexual desire; as well as prostatic hypertrophy among men had a significant relationship with decreased sexual desire. Diagnosis of diabetes, arthritis and depression was associated with a decrease in the sexual desire of women [16].

Our results demonstrated a significant relationship between female sexual desire score and taking five groups of drugs including antihypertensives, anticoagulants, insulin, cholesterol-lowering and cardiac drugs. In similar studies, such as the study of DeLamater et al., a significant correlation was observed between the sexual desire score and regular taking four groups of drugs, including anticoagulants, cardiovascular drugs, cholesterol-lowering and antihypertensive [16]. We found a significant relationship between the sexual desire score and self-reported individual health status and those who rated their health in the "very good" group had a higher mean sexual desire score and those with "poor" option had the lowest mean sexual desire score compared to the rest of the groups. Besides, there was a significant relationship between the sexual desire score and pain level in the last four weeks, meaning that people who selected "never" option for their pain levels in the last four weeks had the highest mean sexual desire score compared to other groups. Lindau et al. expressed that men and women with a better level of health are more sexually active as compared to those who are at lower health levels, and their sexual desire is higher as well [34].

In conclusion, as the age increases, the sexual desire of married women aged 50-70 years decreases, and this downward trend in our country is significant compared to similar studies in other countries. Also, the sexual desire score in middle-aged women is about twice as high as senior women,

suggesting the effect of cultural beliefs of the individual and the society on their sexual desire. The findings of this study can be hopefully an effective step forward to raise the awareness of individuals and consequently the community towards this important need in elderly people, as well as a warning to the society that ignoring the need for sexuality in elderly people can suppress this need and thus reduce the hope and happiness of life in this group of population.

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