

Sexuality and Related Factors of Postmenopausal Korean Women

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Purpose. This cross-sectional survey was conducted to describe the sexuality of Korean women after menopause using a national sample, and to examine relationships between the sexuality and demographic, body mass index, and life style factors including smoking, alcohol use, and physical activity.

Method. From Dec. 20, 1998 to April 30, 1999, 2196 naturally postmenopausal women aged between 41 and 65 years were recruited by a disproportional stratified random sampling method from 7 metropolitans and 6 provinces in Korea. The questionnaire was used to obtain information on the demographic characteristics, life style factors, body mass index, and sexual activities.

Result. The findings show that the frequency of intercourse after menopause decreased among most of postmenopausal Korean women (64.5%). The frequency of women reported their sexual activity as satisfactory was higher among women doing physical activity, not smoking, with higher educational status, with middle socioeconomic status, without sleep disturbance, with lower body mass index, and with good subjective health status.

Conclusion. Further studies need to be designed as the longitudinal studies with larger random samples and better measures of sexuality.

Key Words: Sexuality, Postmenopausal Korean women, Life Style Factors, Demographic Factors, Body Mass Index

According to recent census statistics (Korea National Statistical Office, 1996, 1997), the number of Korean women who are older than 45 constitutes one fourth of the total population of Korean women, and life after menopause constitutes one third of Korean women's total life expectancy. This high ratio indicates that there is need for an in-depth understanding beyond health issues of overall well-being and quality of life for women at this stage of life. Because, for many women, physical intimacy remains an important determinant of quality of

life, sexuality at this age is an important issue.

Sexual dysfunction is characterized primarily by disturbances in sexual desire and changes associated with the sexual response cycle such as sexual arousal, orgasm, or sexual pain (American Psychiatric Association, 1994). A decline in sexual interest and desire accompanied by a reduction in the frequency of sexual activity is frequently reported in aging women (Bachman, 1995; Rosen, Taylor, Leiblum, & Bachmann, 1993; Tunghpaisal, Chendeying, Suttijumroon, Krisanapan, & Udomratn,

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1991). However, Janus and Janus (1993) reports that there is a little change in sexual activity across the life-span of a woman. That is, 68%, 65%, and 74% of women aged 39 - 50, 51 - 64, and older than 65 years, respectively, engaged in sexual activity at least once a week. Also, Rousseau (1998) points out that the myth that older people are not interested in sex springs from cultural connections that link sexuality to romantic love and youth. Often, it is assumed that lower circulating estrogen levels make sex a burden for women because of vaginal discomfort. However, for many couples, sex continues to improve with aging along with increased leisure and decreased responsibilities. These contrary findings may be due to methodological problems (sampling including small study samples, non-representative volunteer responses, or patient populations), research design including cross-sectional studies, and questionnaires which are poorly designed and are difficult to interpret (Roughan, Kaiser & Morley, 1993).

Meanwhile, the few studies of sexuality of women in Korea which have been conducted have methodological limitations such as non-representative samples (Lee, Kim, Yoo, & Lee, 1987a, 1987b); or samples drawn from patient population (Chung, 1985). And, no study of the sexuality of women after menopause exists. Sexuality is multidimensional, with psychosocial attitudinal, cultural, situational, and political aspects, as well as biology (Bernhard & Birch, 2000). Sexuality defines as a collage of overlapping meanings that include sexual identity, an internal drive for pleasure, the biologic capacity for sexual functioning, and a repertoire of intimate physical behaviors in this study.

The purpose of this study is to describe the sexuality of Korean women after menopause using a national sample, and to examine relationships between the sexuality and demographic, body mass index(BMI), and life style factors including smoking, alcohol use, and physical activity.

LITERATURE REVIEW

Among physiological aspects of aging and sexuality, the decline in estrogen that accompanies menopause leads to a number of normal age-related changes in genital appearance. Such changes include a reduction in pubic hair, loss of fat and subcutaneous tissue from the mons pubis, atrophy of the labia majora, and shortening and loss of elasticity of the vaginal barrel. Vaginal secre-

tions decrease in quantity as a result of both atrophy of the Bartholin's glands and a decrease in the number and maturity of vaginal cells (Meston, 1997). Sexual dysfunction directly related to ovarian hormone loss includes dyspareunia, vaginismus, inability to lubricate adequately with sexual arousal, postcoital bleeding, pain, dysuria, urethritis and cystitis, the loss of sexual desire, decreased frequency of sexual thoughts and fantasies, and decreased frequency and intensity of orgasm (Bachman, 1995; McGraw, 1991). Indirect consequences of ovarian hormone loss on sexuality include changes of body contour, which often result in perceived loss of sexual attractiveness, loss of fertility, which may result in perceived "neutering", and menopausal symptoms which adversely affect overall quality of life and sexual function (Bachman, 1995).

With respect to psychological aspects of aging and sexuality, Meston (1997) points out that the psychological factors that influence sexuality include the nature of the interpersonal relationship such as marital conflict, relationship imbalances, commitment issues, intimacy and communication problems, lack of trust, mismatches in sexual desire, boredom, and poor sexual technique, and increases in psychosocial stresses such as the death of a spouse, loss of a job or social status, deterioration of support networks, and health- and finance-related family problems. Bachman, Leiblum, and Grill (1989) reported that sexual difficulties were attributable to physical factors in 32% of cases, to psychosocial factors in 33% of cases, and to a combination of physical and psychosocial factors in 21% of cases. No causal factor could be identified in the remaining 14% of cases.

In previous studies the basic common problems related to the menopause transition include decline in sexual desire, decreased sexual activity, diminished sexual response, and dyspareunia. For example, Gelfand (2000) reported that the two most universally reported problems are changes in sexual desire and onset of dyspareunia. The other issues - changes in sexual activity, changes in sexual response, and the effect on the partner - do occur but are not reported consistently across studies. Sarrel (1988) and Weg (1987) reported that changes in female sex-life during the perimenopausal period might be due to loss of libido, vaginal discomfort, medical treatment or other reasons such as loss of partner or changes in the nature of the relationship.

There is a wide variation in the prevalence of sexual dysfunction in menopausal women. For example, the

common sexual problems reported by Thai women after menopause were loss of libido, orgasmic dysfunction, and dyspareunia. Both sexual desire and activity decreased when compared with premenopausal period. 90% of the subjects reported sexual desire occurred less than once a month. Only 14% of the subjects occasionally reached orgasm while the other 86% never had orgasm after menopause. (Tungphaisal et al., 1991). Sarrel and Whitehead (1985) reported that of the 154 women, who reported having sexual problems, 45% reported a loss of sexual desire and 10% experienced sexual aversion. Dyspareunia and vaginal dryness were common problems, reported by 43% of the women with sexual difficulties. Vaginismus can develop as a conditioned response to painful penetration. Medical examination disclosed vaginismus in 50% of the women with dyspareunia, in 21% who reported having problems with sex, and in 19% of the women in the total series. Sarrel (1990) reported that 68% of subjects reported experiencing problems with sex. Specific complaints are vaginal dryness of at least moderate degree, 58%; dyspareunia, 39%; decrease in clitoral sensitivity, 36%; decrease in orgasmic frequency, 29%; decrease in orgasm intensity, 35%; decrease in sexual desire, 77%; and intercourse of frequencies of once a month or less, 50%. Hagstad (1988) reported that in their forties, 91% of the 444 women asked reported a stable sexual relationship and 78% were either married, engaged to be married, or cohabitating with a man. Most of the women (68%) had a variable sexual desire. 74% of the women had intercourse at least once a week: 42% once a week, and 32% with a higher frequency. 18% had intercourse less than once a month. Dyspareunia seldom occurred, and there was no correlation between dyspareunia and a decrease in sexual interest. Rosen et al. (1993) reported that for healthy women, 45.1% under the age of 35 reported having vaginal intercourse on at least a weekly basis compared to 20.3% of women over 50. The most common sexual problems reported were anxiety or inhibition during sexual activity, lack of sexual pleasure, difficulty in achieving orgasm, lack of lubrication, and painful intercourse, each of which was significantly more prevalent in the postmenopausal group. Lindgren, Berg, Hammar, and Zuccon (1993) reported that 61% of women reported sexual activities, 23% with a frequency of at least once a week, 25% once a month and 13% less than once a month. Sexual activity decreased with biological as well as with chronological age. 69% of

women who had reached menopause within the last four years were sexually active compared to those who had reached menopause at least 15 years before the study (44%). The most common reason for cessation of sexual activity was lack of partner (46%). Only 4% stated that local vaginal discomfort was the main reason for not having a regular sex-life.

However, no study of the sexuality of Korean women after menopause exists. This means that there is a need for an empirical data of the sexuality of Korean women after menopause. The results of this study will contribute to understand the sexuality of postmenopausal Korean women and add to the growing body of knowledge about the sexuality of diverse cultural group.

METHODS

Design and Sample

This cross-sectional survey was conducted using a disproportional stratified random sampling method from all administrative districts in Korea. The subjects were 2,196 naturally postmenopausal women living in 7 metropolitan areas and 6 provinces living with their husbands. Their ages ranged from 41 to 65 years. In order to study natural menopause, 50 women were eliminated because they had had hysterectomies or medical intervention on the ovaries such as surgery or irradiation. Additional women were excluded because either they reported out-of-range values on age (defined as either before age 40 years or later than age 66 years: $N = 897$), were missing data on age at menopause ($N = 333$), or were living without husbands or sexual partners ($N = 611$). A total sample of 4,087 women was obtained for the study, of which 2,196 respondents completed the questionnaires used for the analysis, giving the response rate of 53.7%. The subjects were provided informed consent as prescribed by the committee for human subjects.

Instrument

A semi-structured questionnaire was used to obtain information on the demographic characteristics; life style behaviors including physical activity, smoking, and alcohol use; BMI, and sexuality histories. Women who had smoked regularly were defined as smokers. Alcohol users were divided according to the responses to a self-report of either frequent alcohol use or non-frequent. Physical activity was assessed by asking whether they do

or do not exercise regularly. The sexuality items included frequency of sexual intercourse, sexual satisfaction, and the reasons for any change in sexual frequency and sexual satisfaction.

Procedure

From Dec. 20, 1998 to Apr. 30, 1999, data were collected by thirty-nine research assistants using a self-report questionnaire. The research assistants were undergraduate nursing students in 'K' university. They were educated for data collection by data collection protocol. Thirty-nine research assistants residing in different regions of the country contacted potential women subjects, and consents to participate in the study were obtained from 4,087 women. The research assistants met the subjects on a one-to-one basis and explained the purpose of this study. A research assistant distributed a questionnaire in person to each woman who signed the consent form for completion, and collected the completed questionnaire on site.

Data analysis

Data were analyzed using SAS program. The demographic, biological, life style factors, and sexuality factors were analyzed using descriptive statistics. The differences in frequency and level of satisfaction of sexual activity according to life style factors, demographic factors, and BMI were analyzed by χ^2 -test. The changes of sexual behavior before and after menopause were analyzed using content analysis.

FINDINGS

Sample Characteristics

The sample of 2,196 women whose data were used for analyses in this study represents 45.5 % from seven urban cities including Seoul, and 54.5 % drawn from Korea's six provinces. The mean age of the sample was 55.1 years, with 22% over the age of 60. Nearly half of the sample (51.2%) had middle or high school level of education, and about 9.1% had a college education. 78% of the sample represents the middle level of socioeconomic status. Forty percent of the sample had an occupation. The mean number of children was 3.13. The relative body weight was calculated as a BMI[(Kg/m², body weight/(body height)²]. The mean BMI was 22.9. The range was from 11.5 to 44.0. The mean menopausal age was 49.1 years. The mean sleeping time was 6.7

hours per day. Nearly half (49.9%) of the sample evaluated their subjective current health status as good, while 18.6% evaluated their health status as poor. The HRT users were only 289 (11.1%).

The sexuality in Korean postmenopausal women

Compared to the frequency of intercourse per month before menopause ($M = 4.75$), the frequency of intercourse after menopause decreased ($M = 2.57$). 64.5% of the sample reported a decrease of the frequency of intercourse, while only 0.7 % reported the increase. 34.7% reported no change.

In this study, we questioned subjects about the reasons for any change of frequency of intercourse. The responses were analyzed using content analysis. The reasons for a decrease in the frequency based on husband - related conditions were as follows; ageing ($N = 22$), physical illness ($N = 20$), fatigue ($N = 16$), boredom ($N = 15$), a decrease of sexual desire ($N = 14$), subjective physical weakness ($N = 11$), alcoholic problem ($N = 4$), unwanted sexual relationship ($N = 4$) and erectile problems ($N = 3$). The reasons for a decrease of the frequency based on women were as follows; ageing ($N = 38$), decrease of sexual desire ($N = 37$), boredom ($N = 35$), fatigue ($N = 28$), pain during intercourse ($N = 18$), unwanted sexual relationship ($N = 16$), physical illness or weakness ($N = 10$), relationship problems ($N = 4$), depression ($N = 3$), and environmental problem such as living condition ($N = 3$).

While the reported sexual satisfaction level after menopause was lower compared to that before menopause, the level of sexual dissatisfaction increased after menopause. The difference between the change of the level of sexual satisfaction before and after menopause was statistically significant, $\chi^2 = 316.90$, $p < .0001$.

The difference of the level of sexual satisfaction according to lifestyle factors

Table 1 presents the difference of the sexual satisfaction level according to lifestyle factors such as smoking, alcohol use, and physical activity. The frequency difference of the sexual satisfaction and dissatisfaction according to physical activity was statistically significant, $\chi^2 (1, N = 1355) = 8.30$, $p = .004$. The frequency of women doing physical activity regularly among women reported their sexual activity as satisfactory was higher than that of the women not doing physical activity. The frequency

difference of the sexual satisfaction and dissatisfaction according to smoking or not was statistically significant, $\chi^2 (1, N = 1303) = 9.95, p = .002$. Fewer women who smoked reported satisfactory sexual activities than non-smokers. However, the frequency difference of the sexual satisfaction and dissatisfaction according to alcohol drinking or not was not statistically significant, $\chi^2 (1, N = 1328) = 0.54, p = .46$.

The difference of the level of sexual satisfaction according to other factors

Table 2 presents the difference in sexual satisfaction according to other factors such as sociodemographic factors, body mass index, sleep disturbance, and subjective current health status. The frequency difference in sexual satisfaction and dissatisfaction according to educational level was statistically significant, $\chi^2 (3, N = 1353) = 42.04, p < .0001$. The frequency of women with higher educational status who reported their sexual activities as satisfactory was higher than that of women with lower educational status. The frequency difference in sexual satisfaction and dissatisfaction according to socioeconomic status was statistically significant, $\chi^2 (2, N = 1333) = 6.70, p < .04$. The frequency of women with low socioeconomic status who reported their sexual activities as satisfactory was lower than that of women with middle socioeconomic status.

The frequency difference in sexual satisfaction and dissatisfaction according to sleep disturbance was statistically significant, $\chi^2 (1, N = 1,297) = 21.47, p < .0001$. The frequency of women with sleep disturbance who reported their sexual activities as satisfactory was higher than that of women without sleep disturbance. The frequency difference in sexual satisfaction and dissatisfaction according to BMI was statistically significant, $\chi^2 (2, N$

$= 1,361) = 12.59, p < .002$. The frequency of women with a BMI of 25 or more who reported their sexual activities as satisfactory was lower than that of women with a BMI of 20 more or 25 less, and that of women with a BMI of 20 less. While the frequency difference in sexual satisfaction and dissatisfaction according to menopausal age was not statistically significant, the frequency difference in sexual satisfaction and dissatisfaction according to subjective current health status was statistically significant, $\chi^2 (4, N = 1358) = 23.60, p < .0001$. The frequency of women with poor subjective current health who reported their sexual activities as satisfactory was lower than that of women with good subjective current health.

DISCUSSION

This study reveals that for most Korean women (64.5%), coital frequency decreases after menopause. The frequency of women who reported sexual activity as satisfactory also decrease significantly after menopause.

Table 2. The Difference of the Sexual Satisfaction according to Other Factors

Other Factors	Satisfaction		Dissatisfaction		χ^2	p
	n	%	n	%		
Educational level						
No	39	4.4	44	9.4	42.04	< .0001
Elementary	243	27.5	175	37.2		
Middle/High	492	55.7	228	48.5		
Undergraduate	109	12.3	23	4.9		
Socioeconomic Status						
Upper	35	4.0	20	4.3	6.70	.035
Middle	708	81.3	349	75.5		
Lower	128	14.7	93	20.1		
Menopausal Age						
45	128	14.4	71	15.0	0.26	.88
46-55	742	83.6	394	83.3		
56	18	2.0	8	1.7		
Sleep disturbance						
Yes	309	36.4	222	49.7	21.5	< .0001
No	541	63.6	225	50.3		
BMI						
< 20	231	26.0	94	19.9	12.6	< .002
20 or < 25	544	61.3	290	61.3		
25	113	12.7	89	18.8		
Subjective current health status						
Extremely good	88	9.9	34	7.2	23.6	< .0001
Good	399	44.9	171	36.4		
Fair	266	30.0	148	31.5		
Bad	122	13.7	106	22.6		
Extremely poor	13	1.5	11	2.3		

Table 1. The Difference of the Sexual Satisfaction according to Lifestyle Factors

Lifestyle Factors	Satisfaction		Dissatisfaction		χ^2	p
	n	%	n	%		
Physical Activity						
Yes	328	37.2	139	29.4	8.30	.004
No	554	62.8	334	70.6		
Drinking						
Yes	209	24.0	118	25.8	0.54	.46
No	662	76.0	339	74.2		
Smoking						
Yes	11	1.3	18	4.0	9.95	.002
No	842	98.7	432	96.0		

In Korea, because no study about the sexuality of women after menopause exists, there is no previous work with which the main findings of this study can be compared. However, these findings are consistent of some previous studies conducted in other countries. For example, in a longitudinal study of the effects of menopause in 39 American women, McCoy and Davidson (1985) reported that compared with pre-menopause data, both sexual interest and coital frequency were declined from pre- to post-menopause. Tunghpaisal et al. (1991) also reported that both sexual desire and activity decreased after menopause for Thai women. However, in a study of randomly sampled 2001 Australian-born women aged between 45 and 55 years, Dennerstein, Smith, Morse, and Burger (1994) reported that the majority of women (62%) reported no change in sexual interest, although 31% reported a decrease.

The reasons for any change of coital frequency based on the male partner ranged from physical illness or weakness, a decrease of sexual desire, fatigue, ageing, to boredom. The reasons the women listed ranged from ageing, boredom, fatigue, pain during intercourse, unwanted sexual relationship, to a decrease of sexual desire. In this study we have some limitations. First, we could not investigate the exact meaning of some words such as ageing, physical weakness, or boredom. Second, the causes for the decrease of the frequency of sexual intercourse based on the male partner investigated indirectly from the point of view of the women. Third, the response rate of this open-ended question was very low ($N = 253$, 11.5%). Accordingly, further studies need to pursue the implicit meaning of the words describing the cause of the change using in-depth interview. And then, the cultural difference of these influencing factors needs to be investigated in further studies.

On the other hand, these findings show that sexual satisfaction is higher among women who do physical activity regularly and not smoking. These findings do not show that sexual satisfaction has a cause-effect relationship with life-style factors such as physical activity or smoking. Further research needs to investigate whether sexual satisfaction is the cause or the effect of a health enhancing behavior like physical activity or a health risk behavior like smoking. This finding reveals that sexual satisfaction is higher among women with subjective good health status and with no sleep disturbance. This means that sexual satisfaction may be an important aspect of quality of life or well being of postmenopausal women.

Unexpectedly, menopausal age was not related to sexual satisfaction. This means that sexual satisfaction may be related to other psychosocial factors more than physical factors like menopause. Accordingly, health care providers need to investigate carefully the sexual life of women with subjective poor health status or sleep disturbance.

Minozzi et al. (1996) suggested that it is important to investigate sexuality during the post menopausal and senile period in order to evaluate whether changes in sexual behavior are related to endocrine-functional alterations brought about by menopause or whether the social-economic and environmental context represents the principal factors. Consequently, as Bachman et al. (1989) and Wilmouth (1996) suggest, health care providers caring for women in middlecence need to be aware that this is a period of much change and growth. Health care providers need to be aware they can be helpful to women of this age by supporting women as they do the psychologic work necessary for growth, by expanding their view of middlecence beyond menopause, and by including sexuality with other aspects of health promotion and education.

CONCLUSION

In a national sample of postmenopausal Korean women aged from 41 years to 65 years, the frequency of intercourse and the level of sexual satisfaction after menopause decreased among most of postmenopausal Korean women. In this study, the frequency of women reported their sexual activity as satisfactory was higher among women doing physical activity, not smoking, with higher educational status, with middle socioeconomic status, without sleep disturbance, with lower body mass index, and with good subjective health status. This study is the first study that has investigated the sexuality of postmenopausal Korean women in national sample and the impact of many other factors such as life style behavior factors unrelated to hormonal change on their sexuality. Further studies need to be designed as the longitudinal studies with larger random samples and better measures of sexuality.

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