

# Sexual in Menopausal Women Comparing Perimenopausal and Postmenopausal Women

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**Objective:** To compare aspects of sexual function between perimenopausal and postmenopausal women.

**Material and Method:** One hundred forty women, 70 perimenopausal women and 70 postmenopausal patients in the menopause clinic were interviewed at a first visit regarding aspects of sexual function compared between now and during the previous one-year period. All data were compared between perimenopausal and postmenopausal women.

**Main outcome measure:** The following sexual function including sexual thoughts / fantasies, sexual desire, frequency of sexual intercourse, sexual excitement during sex, moisture in vagina during sex, amount of vaginal lubrication during sex, pain or discomfort during sex, vaginal stretching / flexibility during sex, intensity of orgasm during sex, sexual appeal in client's opinion, overall sexual satisfaction and sexually related anxiety were compared between groups.

**Results:** The mean age ( $\pm$  SD) of perimenopausal and postmenopausal women were 49.4 ( $\pm$  3.0) years and 52.2 ( $\pm$  2.8) years respectively in which there was no significant difference. Most women in both groups had sexual intercourse one to four times per month. There was statistically significant difference between groups in the following aspects, sexual thoughts/fantasies, sexual desire, frequency of sexual intercourse, sexual excitement during sex, moisture in vagina during sex, amount of vaginal lubrication during sex. All items had a negative impact on sexual function but a higher impact was found in postmenopausal women. However, sexually related anxiety was unchanged in both and no significant difference was detected.

**Conclusion:** Some sexual functions were significantly impaired in postmenopausal compared to perimenopausal women. However, the overall sexual satisfaction and sexually related anxiety were unchanged in postmenopausal women. So sexual problems are present but are not considered the most important problem among Thai women.

**Keywords:** Sexual function, Perimenopausal women, Postmenopausal women

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Menopause produces a state of estrogen deficiency. This condition plays an important role for many physical changes such as general body image and especially for the genital system. Vulva and vaginal atrophy are the leading cause of difficult and painful sex. Moreover, menopause is the period of physiologic and psychological change too. These might have a negative impact. The most common form of sexual problem in the United States in adults aged 18 to 59 years old is hypoactive sexual desire disorder (HSDD)<sup>(1)</sup>, which is more prevalent in women than in men ranging from 31 to 49%<sup>(1,2)</sup>. While data on the perimenopausal period reveals a decline of sexual interest and coital frequency<sup>(3)</sup>. Similar to another study, 10 to 15% of perimenopausal women reported no sexual desire and 20% experience occasional

dyspareunia<sup>(4)</sup>. The data on postmenopausal women in Malaysia shows a high percentage of sexual dysfunction such as decreased vaginal secretion during sex, and absent or decreased sexual desire<sup>(5)</sup>. Therefore, the most common about sexual problem in Thai menopausal women is loss of sexual desire<sup>(6,7)</sup> as much as 86.9%<sup>(7)</sup>. However, the previous report from the authors shows a decrease in sexual desire and vaginal dryness for more than 50% of women but severe cases are only 10%<sup>(8)</sup>.

The authors would like to compare the difference between sexual function in perimenopausal and early postmenopausal period in each item because data regarding this area is still limited.

## Material and Method

Women, aged at least 40 or above, who visited the menopause clinic due to climacteric symptoms and had a first visit between December 2009 and December 2011 were invited to join the present study. They gave written informed consent. Inclusion

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criteria were women in the perimenopausal period (irregular periods or absent period for < 12 months) or postmenopausal period for < 3 years (absent period at least one year but not > 3 years). All subjects had regular sexual intercourse and have intact uterus. Exclusion criteria were women who took any hormonal replacement therapy either systemic hormone or topical vaginal hormone in this period or stopped their usage for < 3 months, depressive symptoms, underlying medical condition that inhibited sexual activity, and women who do not understand the Thai language. The present study did not exclude women who used oral contraceptives.

A questionnaire about sexual function in the Thai language was developed by the authors to collect information from the participants. Before beginning the present study, the questionnaire was tested for validation by experts and pioneers in the menopause clinic. The questionnaire consisted of 12 items of sexual functions. Participants can choose to respond to the questionnaire by themselves or respond to one of the authors after the author read the questionnaire to them in a separate room in the clinic. All were asked for each item of sexual function compared between now and the previous period of about one year. Participants had to respond by rating the following, unchanged, slight decrease, marked decrease, slight increase, and marked increase. In addition, baseline characteristics and other aspects related to sexual function were included. When the questionnaire was completed, it was collected immediately by the authors. The response rate was 100%. The sample size was calculated based on the prevalence of sexual problem from the previous study<sup>(8)</sup>. Therefore, groups of 60 women were adequate to compare the differences. Seventy perimenopausal women and 70 postmenopausal women were included in the present study.

#### **Questionnaire of sexual function**

1. Sexual thoughts/sexual fantasies
2. Sexual desire
3. Frequency of sexual intercourse per month
4. Sexual excitement during sex
5. Moisture in vagina during sex
6. Amount of vaginal lubrication during sex
7. Pain or discomfort during sex
8. Vaginal stretching/flexibility during sex
9. Intensity of orgasm during sex
10. Sexual appeal in your opinion
11. Overall sexual satisfaction
12. Sexually related anxiety

The present study was approved by the Ethic Committee of the Faculty of Medicine, Chiang Mai University. Data was analyzed by SPSS program version 11.7. Descriptive data are presented as percent, mean (SD), range, median. Comparative data are compared by Mann-Whitney U test or Student t test according to data distribution. Statistical significance is p-value < 0.05.

#### **Results**

Mean age ( $\pm$  SD) of perimenopausal and postmenopausal women in the present study was 49.4 ( $\pm$  3.0) and 52.2 ( $\pm$  2.8) years respectively. Age ranged from 42 to 58 years and 46 to 61 years in the first and second group respectively. The mean age was not statistically different, while the mean body mass index (BMI) was significantly different between groups ( $p = 0.046$ ). About half in both groups had the level of education below a bachelor's degree. Most participants were Buddhist. The two most common family planning methods used in perimenopausal women were female sterilization followed by male sterilization and 30% used no contraceptive method. It is of note that most Thai women rarely smoked cigarettes or drank alcohol. Women, who smoked, usually smoked only one cigarette per day. Women who consumed alcohol reported drinking only one to three glasses per day. These data are presented in Table 1.

Mean frequency of sexual intercourse per month ( $\pm$  SD) was 3.4 ( $\pm$  3.5) and 2.4 ( $\pm$  2.85) in perimenopausal and postmenopausal women respectively. The mean frequency was not significantly different. Most women in both groups had sexual intercourse one to four times per month but no significant difference between two groups ( $p = 0.063$ ) (Table 2).

There were statistical significant differences between groups in the following items *e.g.* sexual thoughts/fantasies ( $p = 0.002$ ), sexual desires ( $p = 0.001$ ), frequency of sexual intercourse ( $p = 0.02$ ), sexual excitement during sex ( $p = 0.003$ ), moisture in vagina ( $p = 0.008$ ), and amount of vaginal lubrication during sex ( $p = 0.004$ ). Sexual function focused on vaginal stretching/flexibility during sex and intensity of orgasm during sex. Sexual appeal and overall sexual satisfaction were not significantly different between groups. All participants reported a negative impact for these items. However, sexually related anxiety was unchanged from previously in both groups. Data is shown in Table 3.

Table 4 presents other details about sexual activities. Sexual problems related to partners' health was 12.9% and 20.0% in perimenopausal and

**Table 1.** Demographic data of menopausal women

|                                     | Perimenopausal women (n = 70) | Postmenopausal women (n = 70) |
|-------------------------------------|-------------------------------|-------------------------------|
| Age (yrs) (mean $\pm$ SD) (min-max) | 49.4 $\pm$ 3.0 (42-58)        | 52.2 $\pm$ 2.8 (46-61)        |
| BMI (Kg/m <sup>2</sup> )            | 23.3 $\pm$ 2.7*               | 24.0 $\pm$ 3.5*               |
| Education (%)                       |                               |                               |
| Primary school                      | 22.9                          | 25.7                          |
| High school                         | 14.3                          | 10.0                          |
| Vocational educational              | 12.9                          | 14.3                          |
| Bachelor                            | 40.0                          | 48.6                          |
| Higher than bachelor                | 10.0                          | 1.4                           |
| Religion (%)                        |                               |                               |
| Buddhist                            | 97.1                          | 98.6                          |
| Christian                           | 1.4                           | 0                             |
| Islam                               | 1.4                           | 1.4                           |
| Contraception (%)                   |                               |                               |
| Female sterilization                | 42.9                          | 27.1                          |
| Male sterilization                  | 12.9                          | 1.4                           |
| Oral contraceptives                 | 7.1                           | 0                             |
| Injectable contraception            | 0                             | 0                             |
| Intrauterine device                 | 1.4                           | 0                             |
| Male condom                         | 5.7                           | 4.3                           |
| No contraception                    | 30.0                          | 67.2                          |
| Smoking (%)                         |                               |                               |
| Yes                                 | 2.9                           | 2.9                           |
| No                                  | 97.1                          | 97.1                          |
| Alcohol drinking (%)                |                               |                               |
| Yes                                 | 2.9                           | 11.4                          |
| No                                  | 97.1                          | 88.6                          |

\* p-value 0.046

**Table 2.** Frequency of sexual intercourse within one month

| Frequency of sexual intercourse | Perimenopausal women (n = 70) (%) | Postmenopausal women (n = 70) (%) |
|---------------------------------|-----------------------------------|-----------------------------------|
| Mean $\pm$ SD                   | 3.4 $\pm$ 3.5                     | 2.4 $\pm$ 2.8                     |
| < 1                             | 11.4                              | 10.0                              |
| 1-4                             | 74.3                              | 81.4                              |
| 5-10                            | 10.0                              | 7.2                               |
| > 10                            | 4.3                               | 1.4                               |

p-value 0.063

Chi-square test

postmenopausal women respectively. The first person that women wanted to talk to when they had sexual problems was their husbands (more than 50% in both groups).

### Discussion

Postmenopausal women reported more negative impact on many sexual functions such as

sexual thoughts/fantasies, desires, frequency of sexual intercourse, sexual excitement during sex, moisture in vagina, and amount of vaginal lubrication during sex compare to perimenopausal women. However, perimenopausal women also had similar problems but to a lesser degree. These problems can be explained by changing levels of androgen and estrogen that play an important role in sexual health<sup>(9-12)</sup>.

**Table 3.** Mode (percentage) for each item of sexual function compared between perimenopausal and postmenopausal women

| Sexual function                           | Perimenopausal women<br>Mode (%)     | Postmenopausal women<br>Mode (%)           | p-value <sup>+</sup> |
|---|--------------------------------------|--|----------------------|
| Sexual thoughts/fantasies                 | Slight decrease (47.1)               | Marked decrease (50.0)                     | 0.002**              |
| Sexual desire                             | Slight decrease (52.9)               | Marked decrease (57.1)                     | 0.001**              |
| Frequency of sexual intercourse           | Slight decrease (44.3)               | Marked decrease (57.1)                     | 0.020*               |
| Sexual excitement during sex              | Slight decrease and unchanged (34.3) | Marked decrease (52.9)                     | 0.003**              |
| Moisture in vagina during sex             | Slight decrease (38.6)               | Marked decrease (45.7)                     | 0.008**              |
| Amount of vaginal lubrication during sex  | Slight decrease (45.7)               | Marked decrease and slight decrease (42.9) | 0.004**              |
| Pain or discomfort during sex             | Slight increase (40.0)               | Unchanged (28.6)                           | 0.732                |
| Vaginal stretching/flexibility during sex | Slight decrease (45.7)               | Unchanged (34.3)                           | 0.157                |
| Intensity of orgasm during sex            | Slight decrease (40.0)               | Slight decrease (40.5)                     | 0.082                |
| Sex appeal in your opinion                | Unchanged (44.3)                     | Slightly decrease (38.6)                   | 0.211                |
| Overall sex satisfaction                  | Slight decrease (41.4)               | Unchanged (35.7)                           | 0.267                |
| Sex related anxiety                       | Unchanged (58.6)                     | Unchanged (44.3)                           | 0.096                |

<sup>+</sup> Mann-Whitney U test

\* p-value < 0.05

\*\* p-value < 0.01

**Table 4.** Other details about sex

| Details  | Perimenopausal women (n = 70) (%) | Postmenopausal women (n = 70) (%) |
|--|-----------------------------------|-----------------------------------|
| Sexual problems due to their partners that interfere with sexual intercourse | 12.9                              | 20.0                              |
| The first person they want to consult when they have a sexual problem        |                                   |                                   |
| Husband  | 57.1                              | 54.3                              |
| General physicians   | 24.3                              | 25.7                              |
| Psychiatrists  | 2.9                               | 2.9                               |
| Friends  | 8.6                               | 7.1                               |
| Relatives  | 1.4                               | 1.4                               |
| Others   | 5.7                               | 8.6                               |

Sexual function that focused on vaginal stretching/flexibility during sex, intensity of orgasm during sex, sexual appeal in their opinion and overall sexual satisfaction were not significantly different between groups. Such items had negative sexual impact in perimenopausal women but to a minimal degree. Sexual appeal in the perimenopausal opinion was unchanged. This may reflect that they still had positive thinking about menopause. However, after menopause, this opinion is changed but in a minimal degree.

Pain or discomfort during sex was slightly increased in perimenopausal women but unchanged in postmenopausal women. This may be explained by the frequency of sexual intercourse, which was significantly

lower in postmenopausal women. Moreover, the intensity or strength of each sexual encounter from their partners might be lower due to their partners' health. The present study shows 20% of postmenopausal partners had problems that interfered with sexual intercourse. Therefore, overall pain or discomfort during sex did not show any change in this group. In perimenopausal women, this item was slightly increased, which can be explained by decreased vaginal lubrication and thickness, even though the intensity of sexual intercourse from partners may not change.

Sexually related anxiety was unchanged in both groups. It reflects that sexual functions are not the most important factors in the menopausal Thai

population, even though all sexual items (except sexually related anxiety) had a negative impact. This might be different from the view of women from Western countries.

Of interest, 4.3% of postmenopausal women still used male condoms. It may reflect that women are still worried about sexually transmitted disease from husbands.

The mean frequency of sexual intercourse was not high. The frequency of one to four times per month was 74.3% and 81.4% in perimenopausal and postmenopausal women. The previous reports show the positive correlation between sexual frequency and partners' interest<sup>(13)</sup>. Moreover, the partners' health is one of the important keys for regular sexual intercourse<sup>(14-16)</sup>. The present study did not show that the age of partners had an influence on the frequency of sexual intercourse. Age has an inverse correlation with sexual frequency<sup>(17)</sup>.

If the authors compared the perimenopausal and late postmenopausal women, the differences might be significant difference in all items of sexual dysfunction. The present study evaluated the early postmenopausal period, so some points show no difference.

Thai women present some sexual dysfunction but in the minimal degree in perimenopausal women and more severe degree in postmenopausal women. However, postmenopausal women did not feel sexually related anxiety or complained of sexual dissatisfaction. This point is a very interesting point that sex is not the most important thing in their life. Most Thai think, menopause is the state of aging and time for retirement from sex. Some women start to do meditation as their Buddhist belief or help to look after babies of their sons or daughters. This way is common in Thai especially if they retire from employment. In addition, sexual dysfunction may come from many factors such as aging, illness, decreased hormonal level, culture, belief, knowledge, and relationship.

The present study did not explore more details such as masturbation in this period of life. Some women may still want to have regular and more frequent sex but the problem may come from dysfunction partners.

Therefore, sexual dysfunction is common in menopausal women (especially postmenopausal) but sexually related anxiety was unchanged from previously. This means sexual anxiety is not the problem in their life and Thai can adapt themselves to the normal change without much pressure.

Further studies should be done to explore the other aspects of sex in this period such as love, understanding, health, and partner needs that may be different from women.

#### Potential conflicts of interest

None.

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## ปัญหาที่เกี่ยวข้องกับสุขภาพทางเพศของสตรีเปรียบเทียบกับระหว่างสตรีที่ใกล้หมดระดูกับสตรีที่หมดระดูแล้ว

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**วัตถุประสงค์:** เพื่อเปรียบเทียบปัญหาที่เกี่ยวข้องกับสุขภาพทางเพศในสตรีระหว่างสตรีที่ใกล้หมดระดูกับสตรีที่หมดระดูแล้ว  
**วัสดุและวิธีการ:** สตรีวัยหมดระดูทั้งหมด 140 ราย โดยเป็นสตรีที่ใกล้หมดระดูจำนวน 70 ราย กับสตรีที่หมดระดูไปแล้วอย่างน้อย 1 ปี แต่ไม่เกินกว่า 3 ปี จำนวน 70 ราย ที่มาตรวจรักษาหรือมาปรึกษาที่คลินิกวัยทองโรงพยาบาลมหาวิทยาลัยศรีนครินทรวิโรฒ เป็นครั้งแรก สตรีทุกรายได้รับการสัมภาษณ์ในแง่มุมต่างๆ ที่เกี่ยวข้องกับเรื่องเพศในขณะนี้ โดยเปรียบเทียบกับระยะเวลาที่ผ่านมาก่อนหน้านี้ 1 ปี ข้อมูลทั้งหมดนำมาเปรียบเทียบกันระหว่างสตรีใกล้หมดระดูกับสตรีที่หมดระดูไปแล้ว

**ผลการศึกษา:** อายุเฉลี่ยของสตรีวัยใกล้หมดระดูและสตรีที่หมดระดูแล้วในการศึกษานี้คือ 49.4 ( $\pm$  3.0) ปี และ 52.2 ( $\pm$  2.8) ปี ซึ่งไม่แตกต่างกันอย่างมีนัยสำคัญ สตรีส่วนใหญ่มีเพศสัมพันธ์ 1-4 ครั้งต่อเดือน สิ่งที่แตกต่างกันอย่างมีนัยสำคัญทางสถิติของสตรีทั้ง 2 กลุ่มคือ ความคิด/จินตนาการทางเพศ ความต้องการทางเพศ จำนวนครั้งของการมีเพศสัมพันธ์ ความตื่นตัวในใจขณะมีเพศสัมพันธ์ ความชุ่มชื้นในช่องคลอดขณะมีเพศสัมพันธ์ ปริมาณสารคัดหลั่งในช่องคลอดขณะที่มีเพศสัมพันธ์ โดยที่กล่าวมาข้างต้นมีผลในแง่ลบในสตรีทั้ง 2 กลุ่ม แต่ผลลบนี้พบได้สูงกว่าในสตรีที่หมดระดูไปแล้ว อย่างไรก็ตามความวิตกกังวลที่เกี่ยวข้องในเรื่องเพศกลับพบว่าไม่เปลี่ยนแปลงในสตรีทั้งหมดและไม่แตกต่างกันระหว่างสตรีทั้ง 2 กลุ่ม

**สรุป:** ปัญหาทางเพศหลายๆ ประการที่กล่าวมามีการเปลี่ยนแปลงในแง่ลบในสตรีช่วงวัยนี้ทั้งหมด แต่การเปลี่ยนแปลงพบได้เด่นชัดกว่าในสตรีที่หมดระดูไปแล้ว แต่ความพึงพอใจทางเพศโดยรวมและความวิตกกังวลในเรื่องเพศในสตรีที่หมดระดูไปแล้วก็ไม่แตกต่างจากที่ผ่านมา โดยสรุปแม้ว่าจะพบปัญหาทางเพศแต่ก็ไม่ได้ส่งกระทบมาก หรือ เป็นสิ่งที่สำคัญมากในสตรีไทย

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