

## Original Research

### Improving Sexual Function in Perimenopause Women with Loving Yoga Exercise

Rizka Ayu Setyani<sup>1\*</sup>, Fika Lilik Indrawati<sup>2</sup>

<sup>1</sup>Public Health Doctoral Program, Universitas Sebelas Maret, Surakarta, Indonesia

<sup>2</sup>Midwifery Bachelor Program, Universitas Respati Yogyakarta, Yogyakarta, Indonesia

#### ABSTRACT

**Background:** *Reduced vaginal mucus to dyspareunia (pain during intercourse) is often experienced by perimenopausal women. This decreases sexual drive and awakening in women who influence sexual quality with their partner. One of the body and mind intervention exercises in premenopausal women is loving yoga. This study aims to find out the effectiveness of loving yoga against the sexual function of perimenopausal women.*

**Methods:** *This type of research is a quantitative experiment with a one-group pretest-posttest design approach. Research by giving loving yoga intervention for four weeks (with intensity twice a week). Loving yoga movement focuses on kegel gymnastics and pelvic muscle movements, such as plank movement, upward dog, happy baby, downward-facing dog, cat-cow, pigeon, cobbler, leg-up-the-wall, reclining-big-toe, and bridge. Researchers measured the sexual function in 30 women by purposive sampling with inclusion criteria were aged 40-50 and still sexually active before and after loving yoga using the Female Sexual Function Index (FSFI) questionnaire. Analyze data using paired sample T-test.*

**Results:** *This study result is seen from the mean value of 14.33, which means the FSFI score  $\leq 26.5$ . While after complementary therapy loving yoga, the mean value of respondents is 30.13 or an FSFI score  $\geq 26.5$ , which means no sexual dysfunction. Based on the calculated Paired T-Test variables, the sexual function is obtained at the value of -28,748 with a significance value of  $< 0,000$  ( $p < 0,05$ ).*

**Conclusion:** *Loving yoga has an influence 28,748 times on changes in the sexual function in perimenopausal women.*

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## INTRODUCTION

Perimenopause is a transition period of the female cycle that begins at the end of the reproductive stage and ends five years before menopause, around 40-50 years. This period is characterized by a wide range of complaints caused by decreased ovarian function, one of which is that the menstrual cycle's change becomes rare and slight (Campbell, 2000). Premenopause is due to decreased estrogen and progesterone

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#### CONTACT

Rizka Ayu Setyani



[rizkaayusetyani@student.uns.ac.id](mailto:rizkaayusetyani@student.uns.ac.id)  
Public Health Doctoral Program,  
Universitas Sebelas Maret, Ir.  
Sutami Street, No. 36 Kentingan,  
Jebres, Surakarta, Jawa Tengah,  
Indonesia 57126.

hormones produced from the ovaries (Hill, 2016). This hormone deficiency poses various somatic, vasomotor, urogenital, and psychological symptoms that interfere with a woman's overall quality of life (Gregersen, 2006).

One of the complaints experienced by perimenopause women is the change in sexual function towards sexual dysfunction, which has characteristic cycles of sexual response or pain during sexual intercourse (Spano, 1975; Windhu, 2009). Sexual dysfunction in women is joint in the United States, affecting more than 40% of women aged 18-59. This number increased by 88% during perimenopause (Santpure, 2016).

The results of Gregersen et al. (2006) study in women aged 44-55 years that 31% reported a decrease in sexual interest, particularly sexual responsiveness from the perimenopause period to the end of perimenopause. Besides, other aspects of sexual function such as frequency of sexual intercourse, libido, and vaginal dyspareunia. Similarly, the results of research conducted by Ohl (2007) on the influence of menopause on women's sexual dysfunction in Pajang Surakarta village. This study mentions that menopause can increase the incidence of sexual dysfunction. The percentage of sexual dysfunction events before menopause was 14.74%, and after menopause 30.53%. While 85.26% of respondents did not experience sexual dysfunction before menopause, and as many as 69.47% also did not experience sexual dysfunction after menopause. Also, it was found that there is a significant influence of menopause on the occurrence of female sexual dysfunction ( $p=0.001$  [ $p<0.05$ ]).

The Female Sexual Function Index (FSFI) is a clinical trial assessment instrument containing 19 questions of multidimensional female sexual function. FSFI has been validated by DSM IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition) and developed through various stages, including initial component panel selection, initial testing with healthy volunteers followed by linguistic and conceptual validation with a panel of expert consultants. Factors or domains of sexual function are identified, namely subjective desire and arousal, lubrication, orgasm, satisfaction, and pain or discomfort (Rosen et al., 2000).

One complementary therapy that can reduce perimenopausal complaints is yoga (Agarwal, 2013; Cramer, 2018). This physical activity can balance hormonal changes, reduce physical and psychic complaints, strengthen bones, prevent bone fragility, prevent heart disease, improve endurance, and improve sexual function (Brotto et al., 2009). Unlike previous studies, the study focused on yoga interventions on improving sexual function. Besides, this type of research is experimental that develops from previous research methods that are observational. Loving yoga is a type of yoga developed by researchers, where many movements of kegel and pelvic muscles serve to improve sexuality.

Unlike herbal medicine or massage, yoga is a complementary therapy that combines physical and mental exercise. Research on yoga as a complementary therapy in preventing sexual dysfunction in women is still minimal when this problem is widely found in most perimenopausal women. This study aims to measure the effectiveness of loving yoga in improving sexual function in perimenopause women.

## **MATERIALS AND METHOD**

The design of this quantitative research is a quasi-experiment pretest-posttest. The research was conducted for three months, from April to June 2020, in Yogyakarta. Researchers collaborated with the Satuhu Lestari Acceptor Association (APSARI) as a research partner. Before starting the study, researchers took care of an ethical clearance

letter through the Ethics Committee of Universitas Respati Yogyakarta with number: 093.3/FIKES//PL/III/2020.

The determination of research samples was conducted purposively by as many as 30 people. Researchers determined that the sample inclusion criteria were women aged 40-50 years and sexually active. Furthermore, the researchers gave an inform consent sheet to prospective respondents.

Research by giving loving yoga intervention for four weeks (with intensity twice a week). Because the research was conducted during the COVID-19 pandemic, so loving yoga was carried out in a small group of three groups, every ten respondents. This intervention also applies covid-19 prevention health protocol, namely washing hands, wearing masks, and maintaining a distance of at least one meter.

In this study, the intervention was conducted eight times, with a schedule twice a week. Due to the COVID-19 pandemic, loving yoga is done in a small group of three groups with ten respondents per group. Loving yoga movement focuses on kegel gymnastics and pelvic muscle movements, such as plank movement, upward dog, happy baby, downward-facing dog, cat-cow, pigeon, cobbler, leg-up-the-wall, reclining-big-toe, and bridge. Figure 1 is an overview of the implementation of loving yoga as an intervention in this study.



**Figure 1.** Loving Yoga Activities in Premenopause Woman

Variables measured in this study were sexual function before and after loving yoga, including sexual urges (arousal or interest) and sexual awakening (lubrication, orgasm, satisfaction, and pain during sexual intercourse/dyspareunia)—data collection through the Female Sexual Function Index (FSFI) questionnaire. Women with an FSFI score of  $\leq 26.5$  were declared sexually dysfunctional (Rosen et al., 2000). Data analysis using different parametric test paired T-Test previously conducted data normality test with Kolmogorov Smirnov.

## **RESULTS**

### **Sexual Function of Perimenopause Women**

Based on the collection of female sexual function index (FSFI) questionnaire data consisting of 19 questions including sexual desire, sexual stimuli, lubrication, orgasm, satisfaction, and pain, the results were obtained before loving yoga intervention

the average respondent experienced sexual dysfunction. This study result is seen from the mean value of 14.33, which means the FSFI score  $\leq 26.5$ . While after complementary therapy loving yoga, the mean value of respondents is 30.13 or an FSFI score  $\geq 26.5$ , which means no sexual dysfunction. These results are briefly shown in table 1 below.

**Table 1.** Sexual Function of Perimenopause Women

Sexual Function of Perimenopause Women	Mean	N	SD	SEM
Pretest	14,33	30	2,383	0,435
Posttest	30,13	30	1,756	0,321

### Effectiveness of Loving Yoga to The Sexual Function of Perimenopause Women

Table 2 describes the average pretest value of the sexual function in 30 perimenopausal women at 14.33 with a standard deviation of 2,383; while in the posttest, the average value is 30.13 deviation of 1,756. The average value of the sexual function of perimenopause women after and before loving yoga was 25.80.

The test of normality of variable sexual function in perimenopause women with Kolmogorov Smirnov obtained a significance value of  $< 0.851$  (more than  $\alpha = 0.05$ ), meaning average distributed data. Therefore, different tests are used using parametric tests, namely paired T-test.

According to the results of the calculation paired T-test variable sexual function of perimenopause women, the T-value is  $- 28,768$  with a significance value of  $< 0.001$  ( $p < 0.05$ ). Because the p-value  $< 0.05$ ,  $H_0$  (hypothesis zero) was rejected, meaning loving yoga had an influence of 28,768 times on changes in sexual function in perimenopause women.

**Table 2.** Effectiveness of Loving Yoga to The Sexual Function of Perimenopause Women

Sexual Function of Perimenopause Women	N = 30	T Score	P
Pretest	14,33 $\pm$ 2,383		
Posttest	30,13 $\pm$ 1,756		
$\Delta$ Pretest-Posttest	25,80		
Kolmogorov Smirnov			0,851
Paired T-Test		- 28,768	$< 0,001$

## DISCUSSION

Based on the study results, the average perimenopause woman experiences sexual dysfunction before doing loving yoga regularly. Women entering the perimenopause period with 40-50 years undergo physical and psychological changes (Gupta, 2018). Reduced estrogen hormones cause a decrease in the function of body organs, especially reproductive organs. These changes include reduced vaginal mucus resulting in pain during sexual intercourse or dyspareunia (Pangkahila, 2001). The reduced vaginal mucus affects the drive for sexual activity that decreases until sexual dysfunction occurs (Finley, 2019). Besides, the majority of women during perimenopause experience anxiety due to physical complaints. This state is directly correlated with the incidence of sexual dysfunctions that occur.

Previous studies explained that yoga has many benefits in perimenopause women (Amrutha et al., 2013; Cramer, 2018). Regular yoga practice can reduce physiological problems that often occur before menopause, including physical

complaints, sexual function to mild anxiety disorders (Christina et al., 2020; Chaturvedi et al., 2020; Crowe et al., 2019). This complementary therapy can also improve perimenopausal women's quality of life (Joshi, 2011; Shanthi, 2019; Shepherd-Banigan et al., 2017).

The study before is by the research results that complementary therapy loving yoga turns out to be effective in improving sexual function in perimenopause women (40-50 years). Loving yoga had a significant influence of 28,768 times on changes in its sexual function.

This study's results have an impact on the reference of non-pharmacological therapies that can be given to address physiological complaints in perimenopause women. However, further research is needed to explore the quality of sexual function after doing qualitatively measured loving yoga.

## CONCLUSION

Based on the results of the results, the T-value is – 28,768 with a significance value of  $< 0.001$  ( $p < 0.05$ ). Because the p-value  $< 0.05$ ,  $H_0$  (hypothesis zero) was rejected, meaning loving yoga had an influence of 28,768 times on changes in sexual function in perimenopause women. It was concluded that loving yoga could improve the sexual function of perimenopause women when loving yoga is done regularly at least twice a week in four months.

Therefore, researchers recommend this complementary therapy be applied to women aged 40-50 years to overcome physical and psychological complaints before menopause. Further research to evaluate and explore this therapy's implementation also needs to be done, especially with qualitative methods.

Researchers made a video tutorial loving yoga as one of the outside research. This cinematographic work has been copyrighted by the Ministry of Law and Human Rights of the Republic of Indonesia. The loving yoga video tutorial can be seen on Youtube, with URL: [https://bit.ly/VideoTutorial\\_LovingYoga](https://bit.ly/VideoTutorial_LovingYoga).

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