

ORIGINAL ARTICLE

The Effect of Kegels exercises on sexual function in elderly in the east Jakarta region

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ABSTRACT

Introduction: Elderly people experience a decline in the function of their reproductive organs, which will affect intimate relationships with their partners, thus having an impact on physiological problems regarding sexual needs, so they are expected to be able to adapt to changes by improving their sexual function by doing Kegel exercises. **Objectives:** to determine the effect of Kegels exercises on sexual function in the elderly in the East Jakarta area **Methods:** The research uses a quasi-experimental design with a pre-post-test design without a control group, namely observations carried out before treatment and after treatment without using a control group, with a total of 27 respondents starting from May to August 2023 using the 19-item FSFI questionnaire. **Results:** The results showed that sexual scores increased by an average of 2 after Kegel exercises were carried out: sexual desire was 2, sexual arousal was 2.63, lubrication was 1.37, organism was 1, sexual satisfaction was 1.70, pain decreased by 1.19, p value = 0.000, and FSFI score ≤ 26.55 for 21 people (77.8%) who did not experience sexual dysfunction. **Conclusion:** Sexual function will increase if you do light exercise such as gymnastics, namely Kegels exercises. This can also reduce sexual dysfunction.

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1. Introduction

Aging population is the process of aging, namely the gradual disappearance of the tissue's ability to repair itself or replace itself and maintain its normal structure and function. The elderly slowly experience a decline in the structure and function of the elderly system itself, one of which is a decline in the reproductive system (Octascriptiriani et al., 2022). This will respond to sexual stimulation, interest, and participation in sexual activities and will be directly influenced by risk factors such as declining health, feeling unattractive, lack of privacy, and not having a partner. The elderly will experience physical and psychological changes, including changes in sexuality, where in women it is marked by menopause, while in men it is marked by andropause (Darmojo, 2014).

Currently, throughout the world, the number of elderly people is estimated to be more than 629 million; people will increase (1 in 10 are over 60 years old), and by 2025, elderly people will reach 1.2 billion. It is predicted that the number of elderly people will increase in 2020 (27.08 million), 2025 (33.69 million), 2030 (40.95 million), and 2035 (48.19 million) (Kemenkes, 2018). Based on data from the Central Statistics Agency (BPS) in 2021, the number of elderly people in Indonesia is projected to reach 19.9 percent in 2045. The number of elderly people aged 60 years and over in Indonesia is 10.8 percent, or around 29.3 million people. Naturally, elderly people experience a decline in body function, which is characterized by a decrease in physical and psychological abilities and an increased risk of disease that can lead to death (Infodatin-Lansia-2022). This change will have an impact on all aspects of life, including health.

The results of the researcher's initial survey when conducting nursing clinical practice guidance in the Rawa Bunga Subdistrict Community Health Center Area, East Jakarta, showed data on the number of elderly men: 1,569 people, women: 1,837 people, for a total of 3,406 people.

Elderly morbidity data for the first quarter of 2023 totaled 356 elderly people at the Rawa Bunga Community Health Center, and signs of physical health problems were found, such as hypertension, diabetes mellitus, frequent fatigue, and tingling, and they also rarely participated in sports and exercise so that their sexual function decreased, monthly report on the elderly program at the Rawa Bunga sub-district health center, 2023 ([Data Lansia puskesmas, 2023](#)).

Based on research conducted ([David M. Lee, James Nazroo, Daryl B. O'Connor, Margaret Blake, 2015](#)) the prevalence of sexual function in the UK decreases with age. The sexual health of older people should be managed, not only in the context of age, gender, and general health but also in their existing sexual relationships, to determine the picture of sexual function using questionnaires, Female Sexual Function Index. Arin's research results women who experience complaints about their sexual function can be overcome by doing orhiba exercises combined with Kegel exercises results from 54 respondents showed that there was an increase in sexual function between the control group and the intervention group, the pelvic floor muscles play an important role in sexual function in both men and women; thus, therapy physical therapy is used as the main alternative in the treatment of pelvic floor muscle problems for menopausal women who experience sexual dysfunction ([Arini, 2020](#)).

Kegel exercises are light and short exercises that focus on the pelvic floor muscles. Kegels are often done by mothers after giving birth to restore the condition of the birth canal to its original shape, but this exercise can also be done by menopausal or elderly women to improve organ function, their reproduction. Kegel exercises can relax the vaginal muscles and make them wet so that both of them feel excited, thereby reducing pain during sexual intercourse ([Nugrahaningtyas & Utami, 2018](#)). Research shows that pelvic floor muscle exercises (PFME) are very effective in reducing problems arising from the urinary system (urinary incontinence), increasing pelvic floor muscle strength, and also improving a person's quality of life ([Sacomori, C., Virtuosa, J.F., Kruger & Cardoso, 2015](#)). In the Social domain in this research, one of them is related to sexual life, showing that the sexual relations of menopausal women who do regular physical exercise have significant results, the majority of them say they feel satisfied or even very satisfied with their sexual life with their husbands. Subsequent research by ([Nazarpour et al., 2017](#)) prove that sex education and Kegel exercises affect the sexual function of postmenopausal women after a 12-week trial, which was found to have a greater FSFI (female sexual function index) score compared to the control group. These results show that the more menopausal women receive information and education about sex and exercise with Kegels, their sexual function will tend to be better than that of those who don't. The aim of this research is to determine the effect of Kegels exercises on sexual function in the elderly in the Rawabunga Subdistrict area, East Jakarta.

2. Methods

This type of research is quantitative research using a quasi-experiment design with a pre-posttest design without a control group, namely observations carried out before treatment and after treatment without using a control group. This research was carried out in May–August 2023. The population in this study were elderly people who were in the working area of Rawabunga Village Health Center, East Jakarta. Based on previous research, a purposive sampling selection process was carried out, and 4 town were obtained that had the largest number of elderly, namely town 01, 05, 08, and 09. After carrying out several studies to minimize the possibility of dropping out, the researchers only took one town that had the same number of elderly people. The largest is town 08, which is in Rawabunga Village, East Jakarta. Next, sample selection was determined using simple random sampling. The inclusion criteria were female elderly aged ≥ 55 years, physically and spiritually healthy, marital status married, and willingness to be a respondent by filling out an informed consent form, while the exclusion criteria were being sick and taking medication and withdrawing from being a research respondent. Based on the calculation results, the total sample that met the inclusion and exclusion criteria was 27 elderly people. Next, the respondents did elderly exercise and were taught how to do Kegels exercises twice a week for 30 minutes. The duration of the activity was 3 months, using standard Kegels exercise procedures.

Respondents who have carried out Kegels exercises for 3 months are required to fill out the Female Sexual Function Index (FSFI) measurement instrument. Where This instrument has been carried out for validity and reliability and has been proven to have high sensitivity and specificity in women with and without sexual dysfunction. had a sensitivity of 89.9% and a specificity of 86.3%, compared with other questionnaires.

A 19-item questionnaire to measure changes in sexual function. The assessment for each sexual desire domain is a score in the range of 1-5 A score of 1 indicates the respondent has had no sexual desire in the last four weeks. The sexual arousal domain questions have a score in the range of 0-5. A score of 0 indicates the respondent has had no sexual arousal in the last four weeks. Vaginal lubrication domain questions score in the range of 0-5. A score of 0 indicates the respondent's vagina has not been wet during sexual intercourse in the last four weeks. The orgasm domain questions have a score range of 0-5, and a score of 0 indicates the respondent has not experienced an orgasm in the last four weeks. The sexual satisfaction domain question has a score range of 0-5, and a score of 0 indicates the respondent has not experienced sexual satisfaction during the last four weeks and the sexual pain domain question has a score range of 0-5, and a score of 0 indicates the respondent has not experienced pain during sexual intercourse during the last four weeks. Below is a table assessing each domain of sexual desire (David M. Lee, James Nazroo, Daryl B. O'Connor, Margaret Blake, 2015).

Table 1 Assessment Domain Sexual Desire

Domain	Statement	Range Score	factor	Score Min	Score Max	Score
Sexual desire	1,2	1-5	0,6	1,2	6,0	
Sexual arousal	3,4,5,6	0-5	0,3	0	6,0	
Vagina lubrication	7,8,9,10	0-5	0,3	0	6,0	
orgasm	11,12,13	0-5	0,4	0	6,0	
sexual satisfaction	14,15,16	0-5	0,4	0	6,0	
Pain	17,18,19	0-5	0,4	0	6,0	
		Range Scale		1,2	36,0	Total

Note:

Score > 26,55 categorized no sexual dysfunction

Score < 26,55 categorized sexual dysfunction (Fadel Khatami, 2021)

This study also used observation sheets according to standard Kegels exercise procedures.

3. Results and Discussion

The number of respondents in this study was 27 elderly women. Based on age characteristics, the majority of respondents were 55-60 years, namely 48.1%. At the educational level, the majority of respondents were at the high school education level, namely 40.7%. Based on employment status, it was found that 59.3% did not work and 81.5% did not have their own income. Based on marital status, all respondents were recorded as having been married > 30 years. Based on health problems, it was found that 19 respondents (70.4%) had no health problems and 8 other respondents did not have health problems (29.6%).

Table 2 Frequency Distribution of Elderly women Characteristics (n=27)

Variable	Amount	Percentage(%)
Age		
55 – 60 years old	13	48,1
61 –66 years old	9	33,3
>67 years old	5	18,5
Education level		

	Elementary school	6	22,2
	Yunior high school	10	37,0
	Senior high school	11	40,7
Occupation			
	Retired	1	3,7
	Employee	6	22,2
	Entreprenuer	4	14,8
	No Job	16	59,3
Income			
	Yes	5	18,5
	No	22	81,5
Marriage age			
	<30 year	27	100
	>30 year	0	0
Health disorder			
	Yes	8	29,6
	No	19	70,4

Table 3 Comparison of the Results of the Female Sexual Function Index (FSFI), namely Sexual Desire, Arousal, Lubrication, Orgasm, Sexual Satisfaction, Pain During Sexual Intercourse in the Elderly Before and After Kegels Exercise Intervention

Variable	Mean ± SD Lower-Upper 95% CI	Mean	Min	Max	p
Sexual desire					
Pre-test	2,19±1,075		1	6	0,000
Post-test	4,19±0,736	+2	2	6	
Sexual arousal					
Pre-test	1,78±1,188		0	5	0,000
Post-test	4,41±1,185	+2,63	2	6	
Vagina lubrication					
Pre-test	2,41±1,394		0	5	0,000
Post-test	3,78±1050	+1,37	2	6	
Orgasm					
Pre-test	2,93±1,439		0	5	0,000
Post-test	3,93±0,917	+1	2	6	
Sexual satisfaction					
Pre-test	2,52±1,451		1	5	0,000
Post-test	4,22±1,188	+1,70	2	6	
pain					
Pre-test	4,04±1,018		2	6	0,000
Post-test	2,85±1,199	-1,19	1	5	

Based on table 3, it can be seen that the sexual score experienced an average increase of 2 after Kegel exercises were carried out, sexual desire was 2, sexual arousal was 2.63, lubrication was 1.37, organism was 1, sexual satisfaction was 1.70, experienced a decrease in pain of 1.19 after carrying out Kegel exercises. So, it can be concluded that there is an effect of Kegel exercise intervention on sexual desire, arousal, lubrication, orgasm, sexual satisfaction, pain during sexual intercourse p = 0.

Table 4 Changes in FSSI scores in the elderly before and after carrying out Kegels exercise nursing procedures in Rawabunga Village (n=27)

Intervention	≥26,55		< 26,55		Total	
	n	%	n	%	n	%
Pre	10	36,03	17	63,97	27	100,0

Kegel Exercise	Post	6	22.2	21	77,8	27	100,0
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From table 4, after carrying out Kegel exercises, the FSI score ≥ 26.55 was obtained for 6 people (22.22%) who experienced sexual dysfunction, FSI score ≤ 26.55 for 21 people (77.8%) who did not experience sexual dysfunction.

3.1 Discussion

This research was conducted on respondents who had the characteristics of elderly people in Rawabunga Village, East Jakarta (table 2). The largest age group was 55-60 years old. This shows that the respondents are in the middle age to elderly age group, this has been determined by the World Health Organization (WHO) regarding age limits. At this age, individuals experience many physical changes and a decrease in organ function, especially in the reproductive system. Research in Australia states that all types of sexual dysfunction increase significantly with age. The gender of respondents is dominated by women. The aging process in women is different from that in men, namely, men do not experience biological events at the transition to old age, whereas in women there is menopause. Research (Prastiwi, E., Niman, S., & Susilowati, 2014) shows that complaints in menopausal women related to genital atrophy are dyspareunia (40%), genital itching (40.8%) and loss of libido (51%). In the previous year, a study conducted by (Cabral, P. et al., 2014), found that 67% of 370 women aged 40-65 years experienced sexual dysfunction, while research by (Sobhgol, S. S., Priddis, H., Smith, C. A., & Dahlen, 2019) found that 75.7% of women aged 40-50 years experienced. Sexual dysfunction as assessed using the FSFI questionnaire. This is caused by hormonal factors, the two main hormones found in a woman's body are estrogen and progesterone.

The highest level of education for the elderly in this study was high school, namely 40.7%, educational factors can influence women's health conditions, the higher the education, the easier it is to receive information, ways of thinking, and changes in behavior in a positive direction, especially those related to health in dealing with complaints during menopause, so that it can increase understanding and knowledge, which will ultimately have a positive impact on improving health status and quality of life (Hartati, Multazim, A., & Asrini, 2018). Respondents in this study were mostly elderly who did not work/housewives amounting to 59.3%, where the cause of difficulties in dealing with complaints during menopause was the limited health information they had, especially housewives who lived in urban areas, especially in housing where there was very little space to move around. Very limited ability to do light exercise. The research results show that the majority of elderly marriages in the Rawa Bunga sub-district are >30 years. The length of marriage will influence the individual in completing a developmental stage with good self-adjustment and being able to complete their developmental tasks to achieve success with their partner. Several studies show that success achieved in old age consists of three dimensions, namely physical, mental and social health (Sulastrri, 2014). The research results showed that the majority of elderly people did not experience health problems, namely 19 people (70,4%). The elderly are an age group that is vulnerable to changes due to the aging process. These changes cause problems that can affect the quality of life of the elderly. One of the problems that is often encountered in the elderly, apart from physiological problems, is degenerative health problems. Health problems can have a big impact on the elderly, including reducing the elderly's ability to carry out daily activities (Ekawati, 2015).

Based on Table 3, it shows that the elderly before and after doing Kegels exercises from 27 respondents experienced an average increase of 2. with t test analysis. The sexual function of those who do Kegels exercises is much better than that of those who don't do Kegels exercises. Based on the results of this analysis, it shows that sexual function will increase when doing light exercise such as gymnastics, namely Kegels training activities. This situation indicates that the sexual function of women who regularly do Kegels exercises. This is in accordance with the statement that exercise can maintain physical, psychological, and social health which is the main

capital when carrying out optimal sexual activities, which influences the quality of sexual relations. Sexual desire increases, thanks to regular exercise activities, because exercise is proven to increase testosterone levels in men and estrogen for women. Exercise also makes blood circulation smoother, including blood flow to sensitive points which can increase sexual desire and can reduce the degree of deficiency. Perimenopausal estrogen and hot flashes on the face are caused by an increase in LH pulses, so regular physical exercise reduces hot flashes by reducing LH concentrations (Razzak, Z. A., Khan, A. A., & Farooqui, 2019).

Table 4 shows that 21 people (77.8%) of respondents who had done kegels exercises showed an FSSI score of ≤ 26.55 who did not experience sexual dysfunction. This is in line with the results of Arini's research in 2020, which stated that women who experience complaints about their sexual function can be overcome. By doing Orhiba exercises combined with kegels exercises, 54 respondents showed that there was an increase in sexual function between the control group and the intervention group. The pelvic floor muscles play an important role in sexual function in both men and women; thus, physical therapy is used as the main alternative in the treatment of this problem. pelvic floor muscles for postmenopausal women who experience sexual dysfunction. Problems related to sexual function during menopause can be treated with non-pharmacological methods that are known to be effective and have low risks, namely doing Kegel exercises, using vaginal dilators and lubricants (gel), and avoiding the use of vaginal sheets or tampons (Howard, 2010). The research results of S. Nazar Poor et al. stated that there were 145 post-menopausal elderly respondents after 12 weeks using the FSFI total score. The orgasm and satisfaction scores were significantly higher compared to the control group (4.43 and 4.88, 3.95, respectively, and 4.39) (Nazarpour et al., 2017).

Conclusion

Elderly individuals who underwent Kegel exercises showed improvements in sexual scores, with an average increase of 2 points after performing Kegel exercises. Specifically, sexual desire increased by 2 points, sexual arousal by 2.63 points, lubrication by 1.37 points, orgasm by 1 point, and sexual satisfaction by 1.70 points, while pain decreased by 1.19 points, with a p-value of 0.000. These results indicate that sexual function improves with light exercise, such as Kegel exercises. When done regularly, these exercises can help mitigate the effects of reduced estrogen efficiency during perimenopause. Hot flashes, which are caused by an increase in LH pulses, can also be reduced with regular physical exercise by lowering LH concentrations. Kegel exercises resulted in FSFI scores of ≥ 26.55 for 6 individuals (22.22%) who experienced sexual dysfunction, and FSFI scores of ≤ 26.55 for 21 individuals (77.8%) who did not experience sexual dysfunction. Women experiencing sexual function issues during menopause can address these problems with non-pharmacological methods known to be effective and low-risk, such as Kegel exercises, using vaginal dilators and lubricants (gel), and avoiding the use of vaginal sheets or tampons.

Ethics approval and consent to participate

This research received permission from the provincial government of the Special Capital Region of Jakarta, PTSP No.: 10/AF.1b/31.75/2/TM.23.04/e/2023 and Health Service No. 265/HM.10.02 and ethical approval No. 102/KEPPKSTIKSC/VI/2023.

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References

- Arini, L. A. (2020). Fungsi Seksual Wanita Menopause yang Melakukan Orhiba Kombinasi Kegrel Exercise: Studi Pengukuran Skor FSFI. 16(2), 240–252.
- Cabral, P. ., Canario, A. ., Spyrides, M. ., & Uchoa, S. ., Junior, J. ., Giraldo, P. ., & Goncalves, A. . (2014). Physical Activity And Sexual Function In Middle-Aged Women. *Rev Assoc Med Bras.*
- Darmojo, B. (2014). *Buku Ajar Geriatri*. 5th ed. Jakarta: Badan Penerbit FKUI
- Data Lansia puskesmas, (2023).
- David M. Lee, James Nazroo, Daryl B. O'Connor, Margaret Blake, N. P. (2015). Kesehatan dan Kesejahteraan Seksual di Kalangan Pria dan Wanita Lanjut Usia di Inggris: Temuan dari Studi Longitudinal Inggris tentang Penuaan .
- Ekawati Sutikno. (2015). Faktor-Faktor Yang Berhubungan Dengan Gangguan Kesehatan Mental Pada Lansia : Studi Cross Sectional Pada Kelompok Jantung Sehat Surya Group Kediri Factors Associated With Mental Health Disorder In The Elderly : A Cross Sectional Study On Kelompok Jantung. 1–8.
- Fadel Khatami. (2021). Hubungan Fungsi Seksual Terhadap Kualitas Hidup Pada Wanita Usia 17-35 Tahun Di Indonesia. 1(5), 60–69.
- Hartati, Multazim, A., & Asrini, A. (2018). Fungsi seksual perempuan menopause dikota Makassar tahun 2018. *Al-Sihah : Public Health Science Journal*, 10(1), 40–48.
- Howard, F. M. (2010). *Pelvic pain: diagnosis and management*. St. Louis: Mosby Inc.
- Infodatin-Lansia-2022.pdf. (n.d.).
- Kemenkes, R. . (2018). *Profil kesehatan Indonesia 2018 [Indonesia health profile 2018]*.
- Miller Carol A. (2004). *Nursing Care of Older adults : Theory and Practice*. Lippincott Company. P.
- Nazarpour, S., Simbar, M., Tehrani, F. R., & Majd, H. A. (2017). Effects of Sex Education and Kegrel Exercises on the Sexual Function of Postmenopausal Women : A Randomized Clinical Trial. *The Journal of Sexual Medicine*, 1–9. <https://doi.org/10.1016/j.jsxm.2017.05.006>
- Nugrahaningtyas, J., & Utami, W. (2018). Overview of Disease Diagnosis Who Are Impacted Earthquake and Tsunami in Palu in Unriyo Health Post in Balaroa Refugeeing Camp October 30-November3, 2018. *Pendekatan Multidisiplin Ilmu Dalam Manajemen Bencana*, November 2018, 1–6.
- Octascriptiriani, N., Putri, K., Tinggi, S., Kesehatan, I., Kunci, K., Seksualitas, F., & Seksualitas, F. H. (2022). Hubungan Perubahan Fungsi Seksualitas Dengan Frekuensi Hubungan Seksual Pada Lansia Wanita Usia 45- 59 Tahun Di Kelurahan Tipar Wilayah Kerja Puskesmas. 11(1), 14–21.
- Prastiwi, E. ., Niman, S., & Susilowati, Y. (2014). Pengaruh Penggunaan Lubrikan Terhadap Peningkatan Fungsi Seksual Pada Wanita Menopause Di RW 01 Desa Pakuhaji Kecamatan Ngamprah Bandung. *Ejournal Stikes Borromeus*.
- Razzak, Z. A., Khan, A. A., & Farooqui, S. I. (2019). Effect of aerobic and anaerobic exercise on estrogen level, fat mass, and muscle mass among postmenopausal osteoporotic females. *International Journal of Health Sciences*, 13(4), 10–16.
- Sacomori, C., Virtuosa, J.F., Kruger, A. P., & Cardoso, F. L. (2015). Pelvic floor muscle strength and sexual function in women. *Jurnal Fisioter Mov*. 28(4).
- Sobhgol, S. S., Priddis, H., Smith, C. A., & Dahlen, H. G. (2019). The Effect of Pelvic Floor Muscle Exercise on Female Sexual Function During Pregnancy and Postpartum: *Sexual Medicine Reviews*, Vol. 7, Pp. 13–28.
- Sulastri, S. (2014). Effect of Social Support and Livelihood Strategies on Subjective Well-Being of Family at Retirement Age *Abstract*. 7(2), 83–92