KIAN JOURNAL
ISSN 2964-3910
PREFIX DOI: 10.56359/kian
Vol. 4 No. 1 Page Number 11-18

Implementation of Kegel Exercises for Pregnant Women with Urinary Incontinence in the Third Trimester at Kahuripan Public Health Center, Tasikmalaya

Etty Komariah Sambas[1], Enok Nurliawati[2], Talitha Agripina Salsabilla[3], Aneng Yuningsih[4]
[1]Lecturer of Bachelor of Nursing study program, Bakti Tunas Husada University, Indonesia
[2]Lecturer of the Vocational Nursing study program, Bakti Tunas Husada University, Indonesia
[3]Student of Vocational Nursing study program, Bakti Tunas Husada University, Indonesia
[4]Lecturer of Nursing Professional Education Study Program, Bakti Tunas Husada University, Indonesia

Correspondence author: Etty Komariah Sambas
Email: ettykomariah@universitas-bth.ac.id
Address: Jl. Letjen Mashudi No.20, Kec. Cibeureum, Kab. Tasikmalaya, Jawa Barat 46196
DOI: https://doi.org/10.56359/kian.v4i1.613

ABSTRACT

Introduction: Third trimester pregnancy is often accompanied by physical discomfort such as urinary incontinence, which affects the quality of life of pregnant women. Kegel exercises are one of the exercises that can help overcome this problem by strengthening the pelvic floor muscles and bladder sphincter. This study aims to determine the effect of Kegel exercises on urinary incontinence in third trimester pregnant women in the working area of Kahuripan Community Health Center, Tasikmalaya City.
Objective: This study aimed to determine the response of changes in third trimester pregnant women who experience urinary incontinence after implementing Kegel exercises for three consecutive days.
Methods: This study used a case study design with two pregnant women in their third trimester experiencing urinary incontinence. Data were collected through interviews, physical examinations, and observations before and after the Kegel exercise intervention. Kegel exercises were performed three times a day for three consecutive days. Data were analyzed descriptively by measuring changes in urinary frequency, nocturia, enuresis, and bladder distension.
Results: Before the intervention, both subjects experienced an increase in urinary frequency, nocturia, enuresis, and bladder distension. After three days of Kegel exercises, there was a significant decrease in all these parameters, with increased control of the pelvic floor muscles and bladder sphincter.
Conclusion: Regular Kegel exercises can effectively reduce urinary incontinence in pregnant women in the third trimester. This intervention can improve the quality of life of pregnant women by improving urinary frequency, nocturia, enuresis, and bladder distension. It is recommended that pregnant women independently perform Kegel exercises as a preventative and treatment measure for urinary incontinence during pregnancy.

Keywords: Urinary Incontinence, Third Trimester Pregnancy, Kegel Exercises, Urination Problems, Quality of Life of Pregnant Women

Introduction

Pregnancy is a crucial physiological phase in a woman's life, lasting approximately 39-40 weeks, divided into three trimesters, each with its own unique physiological and psychological challenges. During the third trimester, pregnant women often experience significant bodily changes, which can trigger both physical and psychological discomfort. One common health problem is urinary incontinence (UI), which is the involuntary leakage of urine due to weak pelvic floor muscles and bladder sphincters. This condition can disrupt a pregnant woman's quality of life and increase the psychological burden during pregnancy.

The prevalence of UI in the third trimester of pregnancy is quite high, with approximately 50% of pregnant women experiencing it (Pangestu et al., 2023). Several contributing factors include hormonal changes, the increasing size of the uterus, which puts pressure on the bladder, and decreased strength of the pelvic floor muscles, which control urination. Lifestyle factors such as obesity and maternal age also exacerbate this condition. If not properly managed, urinary incontinence can affect a pregnant woman's physical and mental health, disrupt daily activities, and increase psychological stress due to embarrassment and discomfort.

Addressing this problem requires a comprehensive approach, one of which is through non-pharmacological therapy, namely Kegel exercises. Kegel exercises aim to strengthen the pelvic floor muscles that support the pelvic organs, including the bladder. Regular practice of Kegel exercises can improve urinary control, reduce nocturia, and improve the overall quality of life for pregnant women. Furthermore, Kegel exercises can prevent hemorrhoids, reduce pain during labor, and accelerate postpartum recovery.

Although the benefits of Kegel exercises are well-known, research on the application of this therapy in pregnant women with IU in Indonesia is still limited. Several studies indicate that Kegel exercises can reduce IU symptoms, but few examine their impact on the physiological changes associated with IU in the third trimester. Furthermore, while there is evidence that Kegel exercises improve the quality of life for pregnant women, there is limited research linking the frequency and duration of exercise with optimal outcomes. This study aims to further explore the effects of Kegel exercises in pregnant women with IU in the third trimester, specifically on changes in urinary frequency, nocturia, enuresis, and bladder distension.

This study aimed to analyze the changes that occur in pregnant women in their third trimester with intrauterine incontinence (IU) after practicing Kegel exercises for three consecutive days. It is hoped that the results of this study will provide new insights into the effectiveness of Kegel exercises in managing IU in pregnant women and provide recommendations for nursing practices that can be implemented in maternity health services. Furthermore, this study contributes to the development of evidence-based non-pharmacological interventions to improve the quality of life of pregnant women, particularly in the Kahuripan Community Health Center (Puskesmas) area of Tasikmalaya City.

Overall, this study is important to strengthen the scientific basis for the application of Kegel exercises as an effective nursing intervention in managing IU in pregnant women. The results are expected to assist healthcare workers in providing more optimal care for pregnant women with IU and improve the quality of healthcare for pregnant women in Indonesia, particularly in areas with a high prevalence of IU in the third trimester.

Objective

This study aimed to determine the effect of applying Kegel exercises on improving urinary incontinence in pregnant women in the third trimester in the Kahuripan Public Health Center, Tasikmalaya City.

Method

Design and setting

This study used a case study design with a descriptive quantitative approach. The study was conducted in the Kahuripan Public Health Center in Tasikmalaya City, focusing on pregnant women experiencing urinary incontinence in their third trimester. The aim of this study was to evaluate the changes in pregnant women after implementing Kegel exercises to address urinary incontinence.

Population and sampling

The population in this study was third-trimester pregnant women experiencing urinary incontinence in the Kahuripan Community Health Center (Puskesmas) working area, Tasikmalaya City. The inclusion criteria were third-trimester pregnant women experiencing urinary incontinence, aged 20-35 years, and willing to participate in the study. Exclusion criteria included pregnant women with other medical conditions that could affect their ability to participate in Kegel exercises, such as heart disease or musculoskeletal disorders. The study sample consisted of two pregnant women selected using purposive sampling, considering their conditions met the inclusion criteria.

Instrument and measurement

The instruments used in this study included an interview guide to collect data on urinary incontinence complaints, a physical examination form to assess bladder distension, and a Kegel exercise standard operating procedure (SOP) to ensure consistent exercise implementation. Measurements included urinary frequency, nocturia, enuresis, and bladder distension before and after the Kegel exercise intervention. The validity and reliability of the instruments were pre-tested, and the measurement procedures followed accepted standards in nursing practice.

Data collection and analysis

Data were collected through interviews and physical examinations before and after the Kegel exercise program. The Kegel exercise intervention was performed three times daily for three

consecutive days, with each session lasting 10-15 minutes. Data obtained from the interviews and physical examinations were analyzed descriptively to determine changes in urinary incontinence parameters, including urinary frequency, nocturia, enuresis, and bladder distension. This analysis was conducted to determine whether there were significant differences between the pre- and post-Kegel exercise conditions of the pregnant women participating in the study.

Result

This study was conducted to evaluate the changes that occurred in third-trimester pregnant women experiencing urinary incontinence after performing Kegel exercises for three consecutive days. The following are the results obtained from observations and measurements taken before and after the Kegel exercise intervention.

Table 1. Response Before Implementing Kegel Exercises

Response	Subject I	Subject II
Bladder distension	Increase	Increase
Nocturia	Increase	Increase
Enuresis	Increase	Increase
Urinary frequency	Worsening	Worsening

Table 1 shows that before Kegel exercises, both subjects experienced increased bladder distension, nocturia, enuresis, and urinary frequency. Both subjects exhibited similar symptoms of increased urinary frequency and sleep disturbance due to nocturia.

Table 2. Response After Implementing Kegel Exercises

Response	Subject I	Subject II
Bladder distension	Decrease	Decrease
Nocturia	Decrease	Decrease
Enuresis	Decrease	Decrease
Urinary frequency	Improved	Improved

Table 2 shows that after three days of Kegel exercises, both subjects experienced significant improvements in all measured parameters. Bladder distension, nocturia, enuresis, and urinary frequency showed a clear reduction, indicating that Kegel exercises can reduce urinary incontinence symptoms in third-trimester pregnant women. Both subjects reported improvements in urinary frequency and sleep disturbances due to nocturia after the intervention.

Overall, the results of this study indicate significant improvements in pregnant women experiencing urinary incontinence after regularly practicing Kegel exercises for three consecutive days.

Discussion

This study aimed to evaluate the effect of Kegel exercises on urinary incontinence in pregnant women in the third trimester. Results showed that after three consecutive days of Kegel exercises, there were significant improvements in urinary frequency, nocturia, enuresis, and bladder distension in both subjects. Bladder distension decreased, nocturia decreased, enuresis disappeared, and urinary frequency became more controlled. These findings suggest that Kegel exercises can be an effective intervention in reducing urinary incontinence in pregnant women in the third trimester.

The results of this study align with the theory that Kegel exercises help strengthen the pelvic floor muscles and bladder sphincter, which play a crucial role in controlling urination (Pangestu, 2023). During pregnancy, especially in the third trimester, the increasing size of the uterus puts pressure on the bladder, which can reduce its capacity, leading to frequent urination and urinary incontinence (Selvianti, 2019). Kegel exercises, which involve pelvic floor muscle strengthening exercises, can improve bladder control and reduce excessive urination frequency. The observed reduction in bladder distension also suggests that Kegel exercises can reduce excessive urine buildup, which often occurs in pregnant women with urinary incontinence (Rahardjo, 2018).

This study provides consistent results with several previous studies examining the effectiveness of Kegel exercises in pregnant women with urinary incontinence. For example, a study by Jaffar (2022) showed a significant reduction in urinary incontinence symptoms after two months of Kegel exercises using an app. Similarly, a study by Pangestu (2023) revealed that Kegel exercises can reduce the frequency of nighttime urination, which aligns with our findings regarding reduced nocturia in pregnant women. However, this study differs in that it only used a three-day intervention period, indicating that even in a short period of time, Kegel exercises can have a positive effect on pregnant women with urinary incontinence. This rapid reduction may be related to the effectiveness of pelvic floor muscle exercises in addressing urinary problems caused by increased uterine pressure and hormonal changes during pregnancy.

These findings have important implications for nursing practice and the care of pregnant women. Kegel exercises can be implemented as a safe and effective non-pharmacological intervention to address urinary incontinence in pregnant women. Healthcare practitioners can advise pregnant women to perform Kegel exercises regularly as part of antenatal education to reduce urinary incontinence symptoms. Furthermore, Kegel exercises can improve the quality of life of pregnant women by reducing discomfort from urinary incontinence and helping prevent further problems after delivery. Further research is recommended to examine the long-term effectiveness of Kegel exercises in larger populations to gain a deeper understanding of the long-term impact of this therapy.

Discuss the Limitations

This study has several limitations that should be noted. One is the very small sample size (only two subjects), which may limit the generalizability of these findings to a broader population. Furthermore, the short duration of the intervention (three days) is also a

limitation, as it does not provide a picture of the long-term effectiveness of Kegel exercises. This study also did not consider other factors that may influence urinary incontinence, such as body mass index, age, or maternal lifestyle factors. Therefore, studies with larger samples and longer durations are needed to strengthen these results and provide stronger evidence of the effectiveness of Kegel exercises in pregnant women with urinary incontinence.

Suggest Future Research

Further research can broaden our understanding of the effectiveness of Kegel exercises in treating urinary incontinence in pregnant women using various approaches. First, studies with larger sample sizes and longer intervention durations are needed to determine the long-term effectiveness of Kegel exercises and their impact on pregnant women with high-risk factors, such as obesity or hypertension. Furthermore, comparing Kegel exercises with other interventions, such as physical exercise or behavioral therapy, would provide a more complete picture of which therapy is more effective. Research could also explore the influence of psychosocial factors, such as stress and social support, on pregnant women's responses to Kegel exercises. The use of technology, such as mobile apps to guide Kegel exercises, could also be a research focus to increase pregnant women's engagement and adherence. Finally, research could measure the impact of Kegel exercises on pregnant women's overall quality of life, including their physical and psychological well-being, to provide a more comprehensive picture of the benefits of this intervention.

Conclusion

This study shows that regular Kegel exercises for three consecutive days can significantly reduce urinary incontinence symptoms in pregnant women in the third trimester, including decreased urinary frequency, nocturia, enuresis, and bladder distension. These findings underscore the effectiveness of Kegel exercises as a safe and beneficial non-pharmacological intervention to improve the quality of life of pregnant women with urinary incontinence. Based on these results, it is recommended that Kegel exercises be included as part of antenatal nursing interventions for pregnant women, with further monitoring to determine their long-term benefits and effects in groups of pregnant women with high-risk factors.

Acknowledgement

The authors would like to express their sincere appreciation to the Kahuripan Public Health Center, Tasikmalaya City, for allowing the research to be conducted and for the support provided throughout the study. Gratitude is also extended to the study participants for their willingness and cooperation, which made this research possible.

Author Contribution

- Etty Komariah Sambas: Conceptualization, methodology, manuscript writing and supervision.
- Enok Nurliawati: Literature review, data analysis, and manuscript review.

- Talitha Agripina Salsabilla: Data collection, field observation, and initial draft.
- Aneng Yuningsih: Validation, editing, and final manuscript approval.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Ethical Clearance

This study was conducted in accordance with ethical principles for research involving human subjects. Informed consent was obtained from all participants, and the study protocol was approved by the Ethics Committee of Universitas Bakti Tunas Husada Tasikmalaya.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. It was conducted independently for academic purposes.

References

Amalia, R., Ulfa, S. M., Hikmah, N., & Azizah, N. (2022). Health education on third-trimester pregnancy discomforts and how to manage them. Malahayati Silver Journal, 4(2), 109–117. https://doi.org/10.33024/jpm.v4i2.8470

Astuti, D., & Kulsum, U. (2018). Diet and gestational age in the third trimester of pregnancy with anemia in pregnant women. Indonesian Journal of Midwifery, 2(1), 24. https://doi.org/10.26751/ijb.v2i1.448

Devitasari, R. (2021). The effect of bladder training therapy on restoring normal urination patterns. Journal of Midwifery, 1–23.

Galaupa, R., Fadilah, A. N., Karimah, I., Hernawati, L., & Wahyuningsih, T. (2022). Prenatal Exercise Pocket Book. NEM Publisher.

Jaffar, A., Muhammad, N. A., Sidik, S. M., Admodisastro, N., Manaf, R. A., Foo, C. N., & Suhaili, N. (2022). Feasibility and usability of Kegel exercise pregnancy training app (KEPT app) among pregnant women with urinary incontinence. International Journal of Environmental Research and Public Health, 19(6), 1–13. https://doi.org/10.3390/ijerph19063574

Lestari, R. P., Jauhar, M., Keperawatan, J., Kemenkes, P., Keperawatan, J., Kesehatan, F. I., Kudus, U. M., & History, A. (2021). Kegel exercises are effective in reducing urinary frequency. Literature Review, 1, 29–38.

Pangestu, F., Oktavioanty, J., & Merry. (2023). The effect of Kegel exercises on urination frequency in third-trimester pregnant women in the Sebawi Community Health Center, Sambas Regency. Equatorial Midwifery Journal, 9, 87–91.

Rahardjo, H. E. (2018). Guidelines for the management of urinary incontinence in adults. Indonesian Continence Association (PERKINA), 1–80.

Rahmawati, I., & Putri, R. L. (2018). The effect of Kegel exercises on the level of urinary incontinence in postpartum women. IJOHNS, 3(2), 66–74.

Selvianti, D. (2019). Physiology of pregnancy, childbirth, postpartum and newborn. Textbook Module, 1–7. http://repository.stikessaptabakti.ac.id/160/1/modul%20Fisiologi%20Kehamilan%2C%20lin%2C%20fa%2C%20BBL-converted.pdf

Shir, H. L. (2022). Antenatal pelvic floor education: A review of the midwifery role in promoting pelvic floor health. Bethel University, 1–10.

Sikoway, S., Mewo, Y., & Assa, Y. (2020). Description of hemoglobin levels in pregnant women in the third trimester at Robert Wolter Mongisidi Hospital, Manado. Medical Scope Journal, 1(2), 1–8. https://doi.org/10.35790/msj.1.2.2020.28004

Suminar, E., & Islamiyah, L. (2020). The relationship between parity and the incidence of stress urinary incontinence in women aged 40-45 years. Indonesian Journal Of Professional Nursing, 1(1), 25–32. https://doi.org/10.30587/ijpn.v1i1.2017

Wang, X., Jin, Y., Xu, P., & Feng, S. (2022). Urinary incontinence in pregnant women and its impact on health-related quality of life. Health and Quality of Life Outcomes, 1–8. https://doi.org/10.1186/s12955-022-01920-2

Yulia, F. E. (2019). The effect of Kegel exercises on wound healing in postpartum mothers. Sai Betik Scientific Journal of Nursing, 15(2), 179–184.

Ziya, H., & Putri Damayanti, I. (2021). Kegel exercises to reduce frequent urination in the third trimester of pregnancy. Latest Obstetrics Journal (Current Midwifery Journal), 1(2), 119–125. https://doi.org/10.25311/jkt/vol1.iss2.603