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Kegel Exercise Intervention to Reduce Urinary Incontinence Frequency among Elderly in Rajeg District, Tangerang Regency

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ABSTRACTS

Introduction: Urinary incontinence is a common issue among the elderly, often leading to reduced quality of life and psychosocial discomfort. Kegel exercise is a non-pharmacological intervention known to strengthen pelvic floor muscles and improve bladder control. **Objective:** This community service program aimed to empower elderly individuals to reduce urinary incontinence frequency through guided Kegel exercise. **Method:** The intervention was conducted over a 7-day period involving 10 elderly participants experiencing urinary incontinence. Each participant was trained to perform Kegel exercises three times daily, with close supervision and educational support provided by community health cadres. **Results:** After the intervention, participants reported significant improvements in urinary function, including enhanced ability to delay urination, reduced frequency of leakage, improved awareness of urination urge, decreased nocturia episodes, and reduced bladder distension. The program also increased their confidence and motivation for self-care. **Conclusion:** Kegel exercise is a simple yet effective intervention to manage urinary incontinence among the elderly. Community-based programs that promote structured physical activity and peer support can improve health outcomes and independence among aging populations.

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1. INTRODUCTION

Urinary incontinence is a prevalent condition among the elderly, particularly women, that significantly impacts quality of life. It can lead to embarrassment, social withdrawal, and a decline in mental well-being. Despite its high prevalence, urinary incontinence is often underreported due to feelings of shame and the misconception that it is a normal part of aging. Many elderly individuals fail to seek help, which delays management and exacerbates the condition (Beuttenmüller et al., 2011). Therefore, proactive educational and physical interventions are necessary to address this health issue.

The aging process naturally weakens pelvic floor muscles, contributing to decreased bladder control. Factors such as childbirth history, chronic constipation, obesity, and lack of physical activity may increase the risk of urinary incontinence in older adults. As the population of elderly individuals increases, urinary incontinence is becoming a more pressing public health concern (Dumoulin, Cacciari, & Hay-Smith, 2018). Without proper interventions, it may lead to physical complications such as skin irritation and urinary tract infections. Additionally, the psychological burden can result in anxiety and depression.

Kegel exercises, also known as pelvic floor muscle training, have been recognized as a low-cost and effective non-pharmacological treatment. These exercises strengthen the muscles responsible for bladder support and urinary control (Faisal, Khaira, & Veri, 2023). When performed consistently, Kegel exercises can help reduce both the frequency and severity of incontinence episodes. The simplicity of the technique makes it suitable for elderly individuals, especially when supported by health education and community-based facilitation. It is an ideal strategy for community health programs targeting older adults.

Despite the known benefits of Kegel exercises, many elderly people are unfamiliar with the correct technique. Some may perform the movements incorrectly or give up due to lack of immediate results. Therefore, educational guidance and proper demonstrations are essential to ensure correct practice. Involving healthcare professionals or trained facilitators can increase adherence and confidence in the intervention. Regular supervision also helps maintain motivation among participants.

Community-based health interventions have shown promising results in improving health outcomes in elderly populations. Localized programs can be more culturally sensitive and better accepted by participants. They also allow for peer interaction, which can reduce feelings of isolation and promote mutual support. Health workers and cadres who understand

the local context can help ensure sustainability of the intervention. Rajeg District, with its growing elderly population, presents an ideal location for such a program.

This community service activity aimed to empower elderly individuals by introducing Kegel exercises as a daily routine. The intervention emphasized not only knowledge transfer but also practical skills and personal reflection. Participants were encouraged to understand the link between muscle control and bladder function. Moreover, they were supported in tracking their progress to build a sense of accomplishment. This holistic approach was designed to promote autonomy and dignity among older adults.

The selection of Kegel exercises as the main intervention was based on its accessibility and evidence of effectiveness. Unlike medications or invasive procedures, this method carries minimal risk and is free of cost. Furthermore, it can be performed without the need for special equipment or clinical visits. This makes it ideal for rural or low-resource settings such as Rajeg District. The simplicity of the intervention increases the likelihood of sustainability after the program ends.

Urinary incontinence is often perceived as a taboo topic, especially in older populations. Many participants in previous studies have reported hesitancy in discussing their symptoms. Therefore, the intervention also aimed to create a safe, stigma-free space for participants to share their experiences. Addressing the emotional and cultural barriers surrounding urinary incontinence was crucial to the program’s success. Health education needs to be accompanied by empathy and open communication.

In addition to improving physical health, the program sought to enhance participants' mental and emotional well-being. Gaining control over urinary function can restore a sense of independence and self-worth. It can also reduce caregiver burden, improving family dynamics and overall household well-being. The program's community setting fostered encouragement among peers, further boosting motivation. These secondary benefits highlight the broader value of preventive interventions in elderly care.

Ultimately, this community service initiative aligns with national health goals to promote active and productive aging. Interventions like this support Indonesia’s Healthy Elderly Movement (Program Lansia Sehat). They also reflect the importance of integrated care that combines physical, psychological, and social aspects. The lessons from this activity can inform future programs in other regions with similar demographics. By prioritizing education

and simple physical interventions, elderly health outcomes can be improved effectively and sustainably.

2. METHODS

This community service program was conducted in Rajeg District, Tangerang Regency, involving 10 elderly participants experiencing urinary incontinence. Participants were selected based on inclusion criteria: aged 60 years and above, having a history of involuntary urine leakage at least twice daily, and being cognitively and physically capable of following instructions. The recruitment process was facilitated by local health cadres and coordinated with the community health center. Before the intervention, informed consent was obtained from each participant. Ethical considerations, such as privacy, dignity, and voluntary participation, were upheld throughout the activity.

The intervention was carried out over seven consecutive days in a community health post. On the first day, a health education session was conducted to provide participants with basic knowledge about urinary incontinence, its causes, and the benefits of Kegel exercises. Participants were shown the anatomical location of pelvic floor muscles using diagrams and models. A trained nurse then demonstrated the proper Kegel technique and guided the participants through supervised practice. Special attention was given to helping participants correctly identify and isolate the pelvic muscles without engaging the abdominal or thigh muscles.

Each participant was instructed to perform Kegel exercises three times daily—in the morning, afternoon, and evening—with each session consisting of 10 repetitions. The participants were provided with a simple logbook to record their exercise activity and the number of urine leakage episodes they experienced each day. Reminders and motivational messages were delivered daily by local health cadres. Group sessions were held on Days 3 and 5 to provide peer support, re-check techniques, and answer questions. These gatherings also served as a platform for participants to share their experiences and progress.

Monitoring and evaluation were conducted daily by the community service team through home visits and phone calls. During each visit, facilitators checked participants' logbooks and provided corrective feedback on exercise techniques when needed. By maintaining regular contact, the team ensured adherence and addressed any concerns immediately. On the final day of the intervention, a follow-up discussion was held to assess participants' experiences

and satisfaction. Pre- and post-intervention comparisons were made based on self-reported frequency of urinary leakage.

Figure 1. Community Services Activity

Data from participants' daily logs were analyzed descriptively to evaluate changes in urinary incontinence frequency. Qualitative feedback from participants was also gathered to capture the subjective benefits of the intervention. These included feelings of improved control, confidence, and motivation. The combination of quantitative and qualitative data allowed for a more comprehensive understanding of the intervention's effectiveness. This mixed approach also provided insight into the social and emotional impact of the program beyond physical outcomes.

3. RESULTS AND DISCUSSION

The implementation of Kegel exercise over a seven-day period yielded significant improvements in the urination ability of elderly participants. Before the intervention, most participants reported difficulty controlling urination, with frequent episodes of leakage, particularly during physical exertion or after sneezing. By the end of the program, participants expressed better control over their urination reflex, indicating enhanced pelvic muscle strength. They were able to delay urination longer and reach the toilet in time. This improvement contributed positively to their daily functioning and independence.

The frequency of urination episodes, especially involuntary ones, showed a notable reduction after the intervention. Prior to the program, participants experienced an average of five involuntary urination episodes per day. After one week of Kegel exercise, the number

dropped significantly to around two episodes per day. This decrease was not only consistent across all participants but also sustained during the follow-up discussions. The reduction in frequency suggests a positive impact on bladder capacity and muscle coordination.

Participants also reported improved awareness of their urination sensation, a key factor in preventing accidents. Before the program, some elderly individuals could not clearly feel the urge to urinate until it was too late. Through the intervention, they learned to recognize early sensations of bladder fullness, enabling timely responses (Raddaha, 2022). This improvement was reinforced by the muscle control developed through Kegel practice. The increase in body awareness and responsiveness became a valuable part of their self-management.

Nocturia, or the need to urinate multiple times during the night, was a common complaint among participants at the beginning of the program. Most reported waking up three to five times at night due to the urge to urinate. After engaging in regular Kegel exercises, the frequency of nocturnal urination decreased significantly for the majority of participants. Some reported only one or two interruptions per night, leading to better sleep quality. Improved sleep had a positive impact on their mood, energy levels, and overall health.

The intervention also showed promising effects in reducing bladder distension or the sensation of bladder pressure. Participants had previously reported discomfort from the constant feeling of needing to urinate. After the exercise regimen, this pressure subsided considerably, and many felt more relaxed throughout the day. Kegel exercises helped regulate bladder emptying and supported the muscles in maintaining a normal resting tone. This led to reduced discomfort and less urgency throughout the day.

Feedback from participants during group discussions indicated increased confidence in managing their condition. Before the intervention, most participants avoided going out due to fear of sudden leakage. After the program, several participants resumed social activities such as attending religious events or visiting neighbors. They expressed a renewed sense of dignity and self-assurance. The psychological benefits were as important as the physical ones in improving quality of life.

The role of peer support in this program was also noteworthy. Participants shared their experiences during group sessions and encouraged each other to maintain the daily exercises. This sense of community helped reduce stigma associated with urinary incontinence (Hay-Smith, Herderschee, Dumoulin, & Herbison, 2011). It also fostered accountability and

adherence to the practice. Social interaction in a supportive environment enhanced the intervention's effectiveness.

Daily monitoring and encouragement from local health cadres proved essential to the program's success. Cadres ensured that participants performed the exercises correctly and consistently. Their involvement built trust and made the elderly feel supported and valued. This close supervision also allowed timely corrections and reinforced motivation. The role of community figures thus highlighted the importance of local ownership in health programs.

From a physiological perspective, the Kegel exercise targeted the pubococcygeus and other pelvic floor muscles, which directly influence bladder control. Repetitive contractions helped improve muscle tone and coordination (Khoshbin & Rahimi, 2024). This muscular strengthening contributed to the reduction of urinary leakage and increased bladder support. Such results align with previous studies showing that Kegel exercises are effective in treating stress and urge incontinence in elderly populations. The biological plausibility further strengthens the validity of the outcomes observed.

Another noteworthy finding was the improvement in participants' daily routines and hygiene practices. Reduced incontinence episodes led to fewer clothing changes and less dependence on absorbent pads. Participants expressed relief from the embarrassment of odor or visible wetness. Improved hygiene also lowered the risk of skin irritation and urinary tract infections (Kusumawati, Christiana, & Dewi, 2023). These secondary benefits contributed to their overall well-being.

One limitation identified during the intervention was the challenge some participants faced in isolating pelvic floor muscles without activating abdominal or gluteal muscles. To address this, facilitators provided personalized guidance and repeated demonstrations. Over time, most participants gained better control and confidence in performing the exercise correctly. This underlines the importance of accurate technique and supervision in community-based interventions. Continuous coaching helped maximize the effectiveness of the intervention.

Sustainability of the practice beyond the intervention period was a key concern. At the end of the program, participants were encouraged to continue the exercises independently. A printed guideline and reminder schedule were distributed for home use. Most participants expressed their intention to maintain the routine, citing its simplicity and perceived benefits.

Long-term adherence will be critical in ensuring lasting results. Follow-up visits are planned to assess continued engagement.

The cultural appropriateness of the intervention also supported its acceptance (Neri, 2025). Kegel exercises can be performed discreetly and do not conflict with traditional beliefs. Unlike medication or invasive procedures, they require no special tools and can be done anytime, anywhere. This flexibility made the program more appealing to the elderly population in Rajeg District. Cultural sensitivity must always be considered when designing elderly health programs.

This program demonstrated that even short-term, low-cost interventions can produce meaningful health improvements. With proper planning, guidance, and community involvement, elderly individuals can be empowered to take control of their bladder health (Sulistyawati, Abdullah, Kasimbara, & Fau, 2021). The intervention also demonstrated the feasibility of integrating exercise-based approaches into existing community health strategies. It provides a scalable model for similar rural or suburban settings. The success of this program reinforces the role of preventive health education in aging populations.

The improvements observed in urination ability, frequency, sensation, nocturia, and bladder distension collectively indicate that Kegel exercises are highly effective. Beyond physical outcomes, the program fostered independence, dignity, and social engagement among the elderly. It also strengthened collaboration between health cadres and older community members. These outcomes contribute to healthier aging and reduced burden on caregivers. The program offers a replicable model for managing urinary incontinence in other communities.

4. CONCLUSION

The Kegel exercise intervention demonstrated significant positive outcomes in improving urinary continence among elderly participants. The program led to better bladder control, reduced frequency of involuntary urination, improved sensation and awareness of the urge to urinate, and a marked decrease in nocturia and bladder distension. These improvements enhanced the participants' quality of life, independence, and confidence in managing their condition. The success of this community-based initiative also highlights the importance of education, consistent support, and culturally appropriate interventions. With

continued encouragement and follow-up, Kegel exercises can serve as an effective, low-cost strategy for managing urinary incontinence in aging populations.

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