



LETTER TO THE EDITOR



Telerehabilitation in Pelvic Floor Disorders: A Feasible and Effective Approach



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Received 18/02/2025
Accepted for publication 16/03/2025
Published 09/04/2025

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TO THE EDITOR:

Pelvic floor muscle (PFM) dysfunction, which often presents as urinary incontinence (UI), pelvic organ prolapses, and chronic pelvic pain, is a widespread yet frequently underreported issue among women (1). Urinary incontinence, characterized by the involuntary leakage of urine, affects an estimated 25-45% of women. However, the true prevalence is likely higher, as many women avoid reporting the problem due to stigma or personal embarrassment (2). Urinary incontinence significantly impacts quality of life (QoL), affecting physical and mental health. It also places a substantial economic burden on healthcare systems (1). Pelvic floor muscle training (PFMT) is widely recognized as the first-line conservative treatment for UI. It has proven effective in improving symptoms across different types of UI (1). Despite its benefits, accessing regular PFMT remains a challenge for many women. Barriers such as financial constraints, busy schedules, psychological hesitations, and geographic limitations often prevent patients from continuing treatment (3). For those with mild to moderate UI, conservative management strategies- including PFMT, lifestyle adjustments, and bladder training- are typically recommended (4). Yet, adherence to PFMT programs remains inconsistent. This is partly due to the absence of standardized approaches and the challenges of sustaining self-directed exercise routines at home (4). In many regions, additional obstacles like inadequate insurance coverage and long waiting lists further restrict access to pelvic floor rehabilitation services (4). As a result, the self-management of UI has emerged as a practical alternative or supplement to in-person rehabilitation (4).

Telerehabilitation, a branch of telemedicine, uses digital platforms to deliver remote rehabilitation services. It provides an alternative for individuals facing barriers to traditional in-person care (3). This innovative approach allows easy interaction between therapists and patients through videoconferencing, enabling assessments, exercise guidance, and educational support to be delivered virtually (3). Studies have shown that using telerehabilitation in physical therapy is not only feasible but also practical, often producing outcomes comparable to or even better than in-person therapy (3). For patients with UI and other pelvic floor dysfunctions, telerehabilitation ensures that essential interventions like PFMT can continue without interruption (3).

Feasibility and Effectiveness: Key Considerations

Feasibility and effectiveness are two critical factors when evaluating telerehabilitation in pelvic floor physiotherapy. Feasibility is measured by patient adherence, retention rates, satisfaction levels, and the occurrence of adverse events (3). Studies have consistently reported high levels of patient satisfaction, strong attendance rates, and good adherence to prescribed exercises (3,5,6). Yavas et al. reported that 87% of participants remained engaged in the program after four weeks, with 80% still participating at the twelve-week mark. Additionally, 71% of patients complied with their home-based PFMT routines (6). Adverse events are rare and mild, with some participants reporting temporary symptoms like vaginal itching, abdominal cramps, or minor discomfort, often related to the use of biofeedback devices (3,4,5).

The effectiveness of telerehabilitation in PFMT is assessed through improvements in UI severity, pelvic floor muscle strength, and overall quality of life. Numerous studies have

documented significant progress in these areas, with moderate to large effect sizes observed (1,3). High levels of patient engagement and adherence to home exercise programs underscore the potential of telerehabilitation to deliver successful outcomes. Moreover, the integration of digital technologies - such as mobile applications and online platforms- has shown promise in enhancing exercise adherence, boosting self-efficacy, and improving QoL for individuals managing pelvic floor dysfunction (3). By combining telerehabilitation with these technological advancements, healthcare providers can offer more personalized and effective care (3). These findings suggest that pelvic floor telerehabilitation is well-tolerated, with high adherence and effectiveness and minimal side effects (3).

The Role of Proper Training in PFMT

One of the main criteria of effective PFMT is ensuring that patients can correctly contract their pelvic floor muscles. Surprisingly, around 70% of individuals with pelvic floor dysfunction initially struggle with proper muscle activation (7). To address this issue, various techniques such as anatomical education, urinary flow interruption, palpation, breathing exercises, and biofeedback are employed to teach patients how to perform voluntary contractions (3). Given the complexity of these methods, ongoing supervision is essential, even in telerehabilitation settings. Manual assessments like the Oxford scale may still require in-person evaluations at baseline and post-treatment (3). Some telerehabilitation programs also incorporate portable vaginal biofeedback devices, which require proper training for effective use (1). To maximize the benefits of PFMT, exercises must be carefully designed to each patient's needs, with attention to posture, intensity, and progression. Ideally, this process should be guided by a skilled physical therapist (3).

Regarding treatment duration, a typical telerehabilitation program consists of 8-12 supervised sessions, supplemented by daily home exercises performed 2-3 times daily (3,4). To support personalized progression, mobile applications that offer adjustable exercise parameters and customized training plans, including strength, endurance, and "Knack" exercises, are highly recommended (1). Long-term adherence is crucial for sustained improvement in UI symptoms, and mobile health tools play a key role in empowering patients to monitor their progress and stay motivated (4).

Overcoming Barriers to Telerehabilitation

Despite its advantages, telerehabilitation faces several challenges. One major issue is the limited availability of specialized pelvic floor physiotherapists, which can delay access to care for many patients. Supervision through video consultations has been shown to enhance the success of telerehabilitation programs. It allows therapists to correct improper techniques, such as bearing down instead of contracting the pelvic muscles, which could worsen symptoms (3). To address this challenge, many telehealth programs combine virtual supervision with mobile-based exercise platforms, ensuring patients receive the necessary guidance (4).

Furthermore, access to high-speed internet and appropriate electronic devices can be a financial barrier for lower-income populations, despite the overall cost-effectiveness of telehealth compared to in-person care (4). Additionally, socioeconomic and educational factors may influence a patient's understanding and adherence to digital rehabilitation programs (4). Although many PFMT applications are available, few have undergone rigorous scientific validation to ensure their effectiveness across different muscle groups

and exercise types (1). Cultural and societal attitudes toward UI and digital health technologies also significantly impact patient engagement and treatment adherence (1). Given the sensitive nature of pelvic floor health, it is essential to establish clear ethical guidelines for telerehabilitation practices (8).

In summary, telerehabilitation is a promising solution for delivering pelvic floor rehabilitation services, particularly for those facing geographic or financial barriers to traditional care. It is well-tolerated, promotes high levels of adherence, and has demonstrated significant efficacy in managing UI. However, further research is necessary to refine the integration of digital health tools, validate mobile interventions, and ensure that these services are accessible and inclusive for diverse populations. By expanding access to scientifically validated PFMT applications and improving telehealth infrastructure, we can unlock the full potential of pelvic floor telerehabilitation. This approach can improve outcomes for patients worldwide.

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