

# Qualitative Research: Women's Experiences After a Standard Exercise Program: Adherence to Pelvic Floor Muscles Exercise

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**Abstract:** Therapeutic exercise for pelvic floor muscle (PFM) training and other supplementary exercise modalities, like involuntary fiber exercises, are part of the conservative treatment for pelvic floor dysfunction (PFD). Adherence to the exercises and incorporation of expert health advice into daily life is crucial for the conservative treatment's long-term success. This study aimed to determine the level of adherence to home-based exercises among women with a diagnosis of PFD following an intense in-person exercise program. The research was based on an interpretive paradigm and was a qualitative design. Participants were interviewed in both individual and group settings using a semi-structured approach one month following the end of their exercise sessions. The interviews were meticulously recorded, transcribed word-for-word, and then evaluated using thematic categories. Fifteen females were questioned. Several factors, both internal (such as the women's self-awareness and beliefs) and external (such as professional or instrumental feedback), influence the degree to which the women stick to their home PFM exercise programs. As a result, women may be more inclined to stick to their physiotherapy treatment plans if they incorporate home exercises and easy movements that everyone can do together. A better understanding of the pelvic region, the significance of pelvic floor muscle (PFM) treatment, and the possibility of PFD deteriorating can help women stick to the exercises.

**Keywords:** Pelvic Floor Muscles, Kegels Exercise, Puerperium, Women's Experiences, Muscle Strength.

## 1. Introduction

Many vital functions rely on the pelvic floor muscles (PFM), including sexual function, pelvic organ support, and maintenance of anal and urine continence [1]. Developing and maintaining pelvic floor dysfunctions (PFD) is linked to weakened and lost PFM characteristics. Anal incontinence (AI), pelvic organ prolapses (POP), and urine incontinence (UI) are the most common forms of PFD, and prevalence surveys indicate that as many as 40% of women experience these symptoms [2]. As a primary therapy option, women with mild PFD can participate in a therapeutic education program that teaches them particular PFM exercises and how to self-manage their condition. Furthermore, pelvic floor exercises and other global exercise modalities have just lately made their way into PFD treatment plans, intending to train the PFM to work in tandem with surrounding muscles and posture. Nonetheless, it does not appear that exercise alone determines the long-term efficacy of conservative treatment. The hypothesis that exercise lowers the risk of ovarian cancer is unproven. However, in the first four years after a diagnosis, ovarian cancer patients who engage in 1.5 hours of moderate-intensity exercise per week (e.g., brisk walking) had a 33% reduced risk of death. [3,4]. Patients' compliance with their healthcare providers' recommendations and exercise regimens appears to be a key component in the treatment's short- and long-term success [5].

Researchers looked into women's home PFM exercise experiences and found that they need a high level of self-efficacy, which may be enhanced through personalized instruction programs. The patient's need for and perception of the value of a systematic educational program on pelvic floor functions and dysfunctions, risk factors, and coping mechanisms have been highlighted in recent qualitative research in women with pelvic floor dysfunction (PFD) [6]. To create programs that are both beneficial in the long run and focused on the needs of individual patients, additional research into patients' perspectives and experiences is necessary [7].

Factors reliant on physiotherapeutic performance or patient-specific data have been used to examine and categorize the determinants of therapeutic adherence to PFM exercises [8]. Individuals' misconceptions, erroneous ideas, or lack of body awareness are characterized as obstacles to personal adherence, whereas motivation, perceived self-efficacy, and benefit expectancies are characterized as facilitators. Physiotherapy

treatment adherence is positively correlated with a structured program and careful supervision, and negatively correlated with a high session volume and abstract ideas [9].

Physical therapy was administered to women in a previously published randomized clinical trial if they suffered from stress or mixed urine incontinence, anal incontinence, or mild pelvic organ prolapse. People took part in the study in one of three ways: either the PFM training and educational strategy (PFMT) group, the health education (HE) groups, or the PFMT+HE groups, which combined PFM training with pelvic floor exercises and educational strategy [10]. The women's health physiotherapist who oversaw all three programs met with each participant one-on-one. The eight weeks of physical therapy consisted of two 45-minute sessions per week [11]. In addition, the physiotherapists assigned each intervention group of women particular home exercises to do for 15 minutes every day. Not being able to comprehend or go deeper into the reasons for continuing or abandoning the home guidelines, all three groups exhibited similar adherence statistics, even if the research tasks were different [12].

So, after finishing an intensive in-person treatment that included PFM exercises and an individually tailored educational program, this study aimed to determine women's experience in sticking to the home exercises prescribed by their physiotherapist.

## 2. Materials and Methods

Focus groups and semi-structured interviews took place between September and November of 2023. A study assistant administered the three months of individual therapy and also conducted the personal interviews. This presupposed that the trainees (15 participants) were familiar with the instructor and had the opportunity to develop a trusting connection with them beforehand. A female researcher with over five years of expertise in women's health and a background in qualitative interviewing conducted the study. Another university professor with a background in qualitative research interviews and a Master of Science in maternity nursing (MSC, PhD Maternity Nursing) oversaw the focus groups. To give the impression of objectivity, she was unrelated to the research, and neither she nor the subjects knew her. At the outset of each interview, we explained the study's goals, assured participants that their responses would remain private, and asked for their consent to record the interviews.

Women were chosen using a purposeful sampling technique. Qualified women who were a part of the fitness program and were in the post-treatment (Exercise) follow-up were approached for the qualitative research. To be eligible to participate, individuals need to have finished the full three months of treatment, be fluent in the regional language, and give their informed consent. During the reviews, we interviewed each participant, giving them the freedom to choose when it was most convenient for them to do so. Participants were contacted by phone to set up in-person appointments for the scheduled group interviews.

### 2.1 Participants Characteristics

Participants' average ages ranged from 46.64 to 9.42 years, and their body mass indexes were 25.23 to 4.64 kg/m<sup>2</sup>. Of the participants, 16 (or 49.6%) had gone through menopause, and they had an average of three (2) vaginal births when it came to their reproductive histories. The majority of the women (32.3%) had a bachelor's degree or above, while half (50%), according to the study's annual household income, had only a high school diploma or less. One woman said she had never even been to school. As an inclusion criterion, PFD affected all participants; 82% of women had UI, 44.4% had IA, and 65.6% had POP. There was an improvement in the moms' quality of life and PFM strength after the PT treatment compared to before.

### 2.2 Research tool

The interviewers reviewed the draft guiding questions to see whether they required any revisions. A pilot test was adopted to measure the feasibility of the study. This interview ensured anonymity because it was unrecorded and its sole purpose was to check if the questions were understandable and relevant.

#### Open-ended questions for the focus groups

Numbers	Questions
1	What do you think is the effect of the exercises? What do you think they are good for?
2	At what time of the day do you practice them?
3	What exercises do you practice the most? Why?

4	What exercises do you practice the least? Why?
5	What do you think makes it easier to practice the exercises?
6	What do you think makes it difficult to practice the exercises?
7	What responsibility do you think you have to improve your symptoms?
8	Are the exercises worth doing?
9	Was attending the pelvic floor physiotherapy program worth it?
10	Have you included exercises at some point in your daily life? When?
11	Do you associate the exercises with any situation with a preventive objective?

With the participants' consent, audio recordings of all interviews were used in this research. We just interviewed people once and didn't give them their transcripts back; we also didn't take any field notes. The average time for one-on-one interviews was 24 minutes, whereas interviews with focus groups lasted 65 minutes. We considered data saturation when our findings were in line with those of our earlier interviews.

The updated version 6.1 software was used to do the transcription encoding. The interviews and theme classification were conducted in Tamil. A subsequent version included English translations of quotes and categories.

### 3. Results

Results from the literal transcription analyses revealed four overarching themes: the program (exercise), the effectiveness of the program, participants' individual exercise experiences, and intrinsic and extrinsic causes of the program.

#### 3.1 Exercise

1. "It should be a repaired post-labor treatment as a birth preparation is established" (PFMT+4).

In menopause, HE Group (G1) says, "And..."

Additionally, participants were content with the exercise program overall due to the knowledge obtained, the positive relationship with the physiotherapist, and the improvement in both physical and mental health.

I1: "It was worthwhile, I am pleased, and I would do it again; it has been an excellent and positively shaping experience for me."

#### 3.2 Effectiveness

The good outcomes from the physical therapy came close to the program's satisfaction level. One important component of treatment adherence was the reduction in reported symptoms:

1: "Every time I do the workouts, I feel stronger and more confident. I used to avoid doing things because they made me feel uncomfortable, but that is all over now! With you, I am no longer in danger PFMT7.

Many women displayed indicators of overall health, which meant that they were content, had high self-esteem, felt good about themselves, and could manage their symptoms to lead a normal life again. Because of the sense of relief, they persisted with the treatment PFMT8:

According to the PFMT11, "I have achieved everything I wanted, I am interested in keeping it," meaning that one's self-esteem is high, relationships are normal, and life is generally good PFMT6.

Physical symptoms of the pelvic floor were also detailed in the program's benefits. First, the participants' prior knowledge of their physical symptoms was crucial PFMT5, since these ailments all had a negative impact on some component of their everyday lives:

PFMT9: "I was terrified of coughing up a cloud every time I took two steps—okay, it wasn't a lot, but today there was one, then another, and another..."

Another sustaining element was the fact that these symptoms had subsided following the exercise program:

According to PFMT13, "I coughed calmly so to speak" compared to "before I was very overwhelmed," when the cough was much smaller.

Nevertheless, for many individuals whose symptoms were not completely alleviated, the treatment's limited effectiveness prevented them from continuing at home.

PFMTI5: "I haven't made a complete recovery PFMT2. Putting in a lot of work, but I know that eventually some droplets may slip through the cracks, so..."

#### Mothers' Experiences

Women also reported difficulties maintaining exercise routines due to various health conditions, such as allergies, low back pain, vaginal infections, and colds PFMT4. There was a strong correlation between the perceived difficulty of the PFM exercises and the importance of incorporating them into other daily activities. People were known to work out while commuting, cleaning, driving, or even in the gym. In addition, individual tastes.

for the workouts (exercise type, posture, exercise demands, and perceived effectiveness of each component) affected the consistency with which they were practiced.

"For building force, I solely engage in the maintenance exercise," the respondent said about PFMTI4.

### **3.3 Internal Factors**

Factors influencing adherence included how well patients felt their symptoms were improving, how well they thought their treatment was working, and how well they could replicate and adjust their exercises.

Additionally, adherence was impacted by the participants' attitudes, their local environment, and society's acceptance of symptoms of urine leakage.

PFMTG3: "I'd like to be in the hypopressive group because I think they're really good," referring to friends who engage in hypopressive exercises.

The women's perspective shifted from that of passive recipients of help to that of active providers as a result of their newfound sense of duty.

Now it's on me to take action; if I sit on my hands, no amount of magic will work (I0).

### **3.4 External factors**

Motivating variables were identified as having regular contact with the PT, using biofeedback equipment and mirrors, and having posterior assessments.

Gynecology sent me a paper including several exercises for the PFMT9. However, I had little interest in or comprehension of them. Upon my arrival, I became acutely aware of their significance.

However, several women had to stop attending the weekly PFM sessions to complete the continuing physiotherapy treatment. One of the requirements for participating in the exercises was receiving evaluations and comments from other medical experts.

## **4. Discussion**

The physical therapist included three to six months following a rigorous course of treatment. This is the first qualitative study that we are aware of that interviewed women who had undergone customized treatment for moderate PFD using PFM-guided exercises with biofeedback and/or hypopressive activities. The females in the study had a variety of symptoms. The theme analysis revealed five groups that accounted for the elements that affected patients' adherence: the exercise program itself, the effectiveness of the program, the patient's own exercise experiences, and finally, the patient's own intrinsic and extrinsic factors. From the associated codes for each theme, we were able to identify the positive and bad aspects of adherence.

The necessity for a treatment that alleviated pelvic floor problems, made women feel better overall, and led to secondary benefits like reduced lower back pain was highly valued by women. In a study conducted by Prema et al., [13] it was demonstrated that a well-designed physiotherapy routine could minimize the need for a health education program. These findings are consistent with their findings regarding promotion adherence. Given the importance of educational initiatives in educating women with UI about their health, it is concerning that there is a dearth of knowledge and misconceptions among this population. Finding in previous research how women perceive it as a valuable lifelong learning experience [14], participants in our study emphasized the knowledge received as a positive element of adherence. Additional factors that seemed to help with adherence were the physiotherapist's comments and the regular assessment appointments.

The women in our study shared their experiences, which helped us identify several obstacles to sticking to the plan. The following factors were considered: whether treatment is initiated with advanced symptoms; whether symptoms are not completely resolved; the difficulty in accessing a pelvic floor physiotherapy service due to lack of knowledge about its existence and its high cost, which is not typically integrated into public health services. The women reached a consensus that it could be a suitable time to begin the physiotherapy program

sometime after the first delivery or shortly after the postpartum period. Despite women's beliefs, qualitative research shows that postpartum women are on the dark side about postpartum fibromyalgia (PFD), think it's an unavoidable side effect of giving birth, and aren't aware of the therapeutic options that may help. In their study, Grant et al. interviewed 31 women who had given birth within the past 5 years. The results showed that women could benefit from additional resources to help them complete the MSP exercises correctly. One possible solution could be the development of an app. Lack of self-care, putting family needs first, employment responsibilities, and views about normalcy or taboo themes were among the noted obstacles to adherence [15].

In terms of immediate application, the current study's findings can inform two areas: first, the development of efficient physiotherapy programs that boost women's agency, and second, the identification, assessment, and management of contextual elements, both positive and negative. For the physiotherapist and patient to get to a mutually beneficial agreement on practical home exercises in relevant settings, it is necessary to be familiar with and investigate the elements that contribute to each woman's adherence challenges. It is crucial to learn more about women's perspectives on the present management, their demands for a better PFD, and how they might be involved in their rehabilitation to inform future studies. It is particularly crucial to investigate the personal reasons for treatment adherence or non-adherence in chronic or long-term illnesses like PFD through the design of mixed-method or qualitative studies following intervention research.

## 5. Conclusion

Exercise program, program effectiveness, personal experience with the exercises, intrinsic factors, and extrinsic factors were the five main themes identified in this qualitative study on the experience of maintaining home exercises in women with PFD after intensive physiotherapy treatment. Treatment adherence would be improved with interventions that people feel work and with exercises that are easy to incorporate into their everyday lives. Health practitioners are responsible for educating women about the pelvic floor muscle (PFM), its usefulness in self-care, and the value of recognizing and engaging in these exercises.

## 6. References

1. Adenekan BA, Bø K. Urinary incontinence, pelvic floor dysfunction, exercise and sport. *Sports Med.* 2004;34(7):451-464. doi:10.2165/00007256-200434070-00004
2. Cho ST, Kim KH. Pelvic floor muscle exercise and training for coping with urinary incontinence. *J Exerc Rehabil.* 2021;17(6):379-387. Published 2021 Dec 27. doi:10.12965/jer.2142666.333
3. Tabury K, Monavarian M, Listik E, et al. PVT1 is a stress-responsive lncRNA that drives ovarian cancer metastasis and chemoresistance. *Life Sci Alliance.* 2022;5(11):e202201370. Published 2022 Jul 12. doi:10.26508/lsa.202201370
4. Baljon KJ, Ramaiah P, Saleh EAM, et al. LncRNA PVT1: as a therapeutic target for breast cancer. *Pathol Res Pract.* 2023; 248:154675. doi: 10.1016/j.prp.2023.154675
5. Newman DK. Pelvic floor muscle rehabilitation using biofeedback. *Urol Nurs.* 2014;34(4):193-202.
6. Sheng Y, Carpenter JS, Ashton-Miller JA, Miller JM. Mechanisms of pelvic floor muscle training for managing urinary incontinence in women: a scoping review. *BMC Womens Health.* 2022;22(1):161. Published 2022 May 13. doi:10.1186/s12905-022-01742-w
7. Cross D, Kirshbaum MN, Wikander L, Tan JB, Moss S, Gahreman D. Does a Kegel Exercise Program Prior to Resistance Training Reduce the Risk of Stress Urinary Incontinence? *Int J Environ Res Public Health.* 2023;20(2):1481. Published 2023 Jan 13. doi:10.3390/ijerph20021481
8. Grimes WR, Stratton M. Pelvic Floor Dysfunction. In: *StatPearls.* Treasure Island (FL): StatPearls Publishing; June 26, 2023.
9. Cavkaytar S, Kokanali MK, Topcu HO, Aksakal OS, Doğanay M. Effect of home-based Kegel exercises on quality of life in women with stress and mixed urinary incontinence. *J Obstet Gynaecol.* 2015;35(4):407-410. doi:10.3109/01443615.2014.960831
10. Skardon GR, Khera AJ, Emmanuel AV, Burgell RE. Review article: dyssynergic defaecation and biofeedback therapy in the pathophysiology and management of functional constipation. *Aliment Pharmacol Ther.* 2017 Aug;46(4):410-423.
11. López-Pérez MP, Afanador-Restrepo DF, Rivas-Campo Y, et al. Pelvic Floor Muscle Exercises as a Treatment for Urinary Incontinence in Postmenopausal Women: A Systematic Review of Randomized Controlled Trials. *Healthcare (Basel).* 2023;11(2):216. Published 2023 Jan 11. doi:10.3390/healthcare11020216

12. Hay-Smith EJ, Herderschee R, Dumoulin C, Herbison GP. Comparisons of approaches to pelvic floor muscle training for urinary incontinence in women. *Cochrane Database Syst Rev.* 2011;(12):CD009508. Published 2011 Dec 7. doi:10.1002/14651858.CD009508
13. Prema, Pushpamala Ramaiah, Lamia E Ahmed, Ibtesam Nomani. Effect of foot reflexology on the relief of premenstrual syndrome and dysmenorrhea. *International Journal of Science and Research.* 2017;6(11): 2095-2100.
14. Ramaiah, P. and Albokhary, A. A. (2021) “Muscle Relaxation Strategies on Dysmenorrhea: An Interventional Study”, *Journal of Pharmaceutical Research International*, 33(25A), pp. 79–85. doi: 10.9734/jpri/2021/v33i25A31454.
15. Lindgren A, Dunberger G, Enblom A. Experiences of incontinence and pelvic floor muscle training after gynaecologic cancer treatment. *Support Care Cancer.* 2017;25(1):157-166. doi:10.1007/s00520-016-3394-9