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Urogynaecological physiotherapy as a support of surgical treatment in Poland — assessment of participation, awareness and satisfaction

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Abstract: Introduction: Urinary incontinence (UI) and pelvic organ prolapse (POP) are prevalent conditions that significantly impair women's quality of life, yet awareness of conservative treatment options remains limited.
Aim: To assess women's knowledge and awareness regarding urogynaecological physiotherapy, as well as to evaluate quality of life and satisfaction after gynaecological and urogynaecological surgeries.
Material and Methods: The study included 438 women undergoing surgery for pelvic floor dysfunction or other gynaecological conditions. Participants completed self-designed and validated questionnaires regarding physiotherapy knowledge, pre- and postoperative engagement, preventive behaviours and treatment satisfaction.
Results: Nearly half of the participants (48.1%) had never heard of pelvic floor physiotherapy, with POP patients being the least informed (53.6%). Only 24.3% received a physiotherapy referral before surgery, and 16.7% underwent preoperative therapy, most often limited to one or two sessions. After surgery, 30.5% were referred to physiotherapy, while 18.0% participated. Women who attended physiotherapy — especially preoperatively — were significantly more likely to perform pelvic floor muscle training (PFMT) correctly (78.6% vs. 18.9%, $p < 0.001$) and to engage in preventive behaviours (92.9% vs. 54.1%, $p < 0.001$). Subjective outcomes were also better: patients with physiotherapy both before and after surgery most frequently rated their health as "much better" and expressed greater willingness to repeat surgery ($p = 0.003$).
Conclusion: Awareness of urogynaecological physiotherapy remains insufficient. Physiotherapy, particularly when integrated both pre- and postoperatively, enhances PFMT performance, preventive behaviours, subjective treatment outcomes and satisfaction with surgery. Expanding access to physiotherapy and improving patient education could optimise long-term management of UI and POP.

Keywords: pelvic floor, urinary incontinence, prolapse, rehabilitation, surgery, physiotherapy, dysfunction.

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Introduction

Urinary incontinence (UI) in women is an increasingly common problem that leads to a decrease in quality of life — affecting daily functioning, intimate relationships and self-esteem. It is a frequent issue among women of all ages [1], often associated with peri- or postmenopausal periods, childbirth and post-surgical conditions, especially following procedures involving the pelvic area [2]. One type of UI is stress urinary incontinence (SUI), where urine leakage occurs during situations of increased intra-abdominal pressure, such as physical activity, coughing or sneezing [3]. The cause is a disturbed urethral closure mechanism, resulting from trauma such as vaginal childbirth, surgery or chronic pelvic floor strain due to increased intra-abdominal pressure [4].

According to statistics, over 60% of adult women living in the United States experience UI [5]. In Poland, it is estimated that approximately 2.5 million people are affected by this issue, though precise statistics are lacking, and the number increases each year [6].

The primary method for both prevention and treatment of UI is pelvic floor muscle training (PFMT) [3], which can be supported with physical therapy modalities such as electrical stimulation, biofeedback, magnetic stimulation, laser therapy and ultrasound [1]. Additionally, behavioural therapy [7] and manual therapy [8] are used. These interventions aim to increase resting muscle tone, improve muscle strength, develop correct relaxation techniques and provide patient education [7, 8]. To reduce urine leakage, patients may use pessaries — silicone devices inserted into the vagina that support pelvic organs, alleviate symptoms of incontinence and prolapse and improve quality of life [9]. Disposable tampons with similar functionality are also available [10].

If conservative treatment does not yield the desired results, surgical intervention is considered [11]. However, pelvic surgery is also a risk factor for developing pelvic floor dysfunction [12].

Awareness of stress urinary incontinence remains relatively low among women, although there is increasing knowledge about urogynaecological physiotherapy [13]. The topic is still often treated as taboo, causing feelings of shame for many women, which leads to seeking medical help only at advanced stages of the condition [14]. Unfortunately, due to this delay in consulting specialists after the onset of initial symptoms, conservative treatment often proves ineffective [15]. Consequently, surgical treatment becomes necessary, though it still requires continued rehabilitation to achieve optimal outcomes [16].

Another pelvic floor disorder is pelvic organ prolapse (POP), which involves the descent of one of the pelvic organs in a caudal direction [17]. This occurs when the supporting mechanism becomes insufficient or damaged [12].

POP poses a significant issue in the sexual sphere for approximately 10% of women [18], reducing sexual desire, lowering quality of life and affecting mental health [19]. Studies have shown that combining surgical treatment with subsequent physiotherapy, including PFMT, positively influences sexual function, urinary continence and psychological well-being [20]. This type of physiotherapy may be an optimal therapeutic method and an effective alternative to surgery [18].

UI, POP, limited patient awareness and insufficient diagnostic and therapeutic approaches are not only linked to significant gaps in prevention and treatment but also result in considerable costs for both patients and the healthcare system [13]. These costs include not only expenses for hygiene and personal care products but also rehabilitation and pharmacotherapy [13]. According to data reports, the cost of surgical treatment for UI in 2022 amounted to 24.9 million PLN, and this figure is expected to continue rising in the coming years [21].

Despite the growing number of scientific publications on the subject of UI and POP, there is still a lack of sufficient data confirming the effectiveness of physiotherapy as a viable alternative to surgical treatment [22]. Therefore, further exploration of available therapeutic methods based on reliable scientific research is necessary.

The aim of this study was to assess the knowledge and awareness of women who have undergone surgery related to urinary incontinence, pelvic organ prolapse or gynaecological procedures regarding urogynaecological physiotherapy, as well as to evaluate their quality of life and satisfaction.

Materials and Methods

The study was conducted at the Gynaecology Department of a hospital in Kraków. The participants were women qualified for surgery due to pelvic floor dysfunction, particularly urinary incontinence and pelvic organ prolapse, as well as surgeries performed for gynaecological reasons, including planned urogynaecological procedures. The mean age of participants was 56.18 ± 13.31 years. Based on the type of dysfunction, the following groups were distinguished: pelvic organ prolapse (POP; n = 154), urinary incontinence (UI; n = 157), coexistence of pelvic organ prolapse and urinary incontinence (POP +UI; n = 75) and other gynaecological dysfunctions (GIN; n = 52).

Inclusion criteria were: consent to participate in the study, female sex, history of gynaecological surgery and age above 18 years. Exclusion criteria were: lack of consent to participate, male sex, age below 18 years, previous pelvic surgery such as hysterectomy, comorbidities such as history of stroke or demyelinating diseases, premature menopause and active cancer.

The study was approved by the Jagiellonian University Medical College Ethics Committee (118.6120.133.2023, 1072.6120.5.2023).

After surgery, the women completed a self-designed questionnaire containing questions about their knowledge and awareness regarding urogynaecological physiotherapy, pelvic floor muscles and physical activity. In addition, the women completed validated quality-of-life questionnaires: ICIQ-FLUTS, ICIQ-LUTSqol, PFDI-20, as well as the ICIQ-S questionnaire assessing satisfaction with gynaecological surgery.

Statistical analyses were performed using IBM SPSS Statistics version 29. Statistical significance was defined as $\alpha < 0.05$. Qualitative variables were compared using the Chi-square test. The Shapiro–Wilk test was applied to assess the normality of distribution for quantitative variables. For variables meeting the normality assumption, the t Student test or analysis of variance (ANOVA) was conducted. For variables that did not follow a normal distribution, the Mann–Whitney U test or the Kruskal–Wallis test was applied.

Results

Nearly half of the surveyed women (48.1%) had never heard of pelvic floor physiotherapy. Women in the POP group were the least informed — 53.6% of them were unaware of this treatment option, compared to 46% in the UI group and 25.8% in the POP+UI group ($p < 0.001$). Women who had heard about pelvic floor physiotherapy obtained their information mainly from the Internet (27.9%), medical personnel (21%) and acquaintances (3%). Detailed information can be found in Fig. 1.

According to recommendations, women should undergo conservative treatment for 6 months before surgery. However, only 24.3% of patients (n = 34) received a physiotherapy referral from a physician prior to surgery. In the POP group, 22% received such a referral, compared to 25.9%

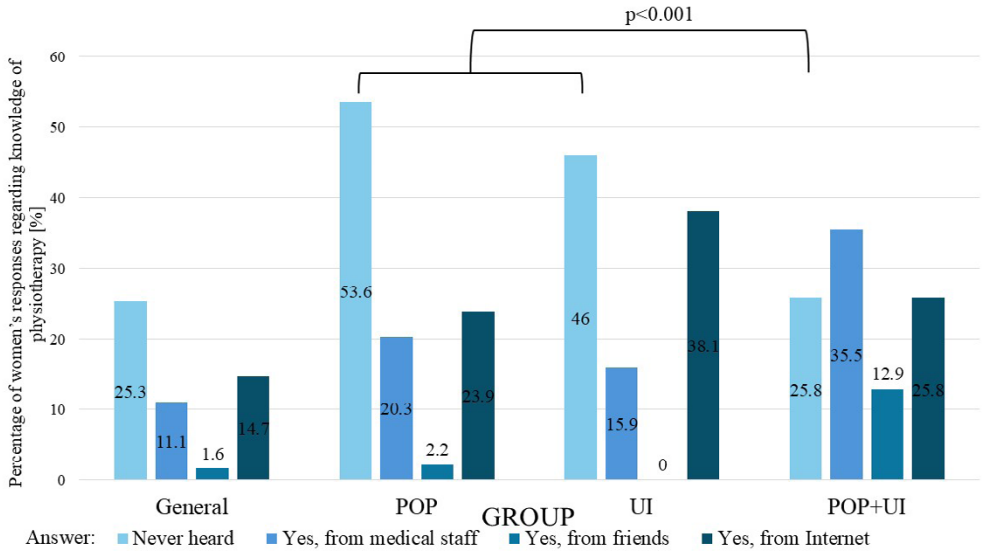

Fig. 1. Knowledge of urogynaecological physiotherapy among women, divided into diseases (General n = 232; POP n = 138; UI n = 63; POP + UI n = 31); p — Chi^2.

in the UI group and 29% in the POP + UI group (p = 0.718). Only 16.7% of patients (n = 39) reported undergoing preoperative physiotherapy. The highest utilisation was among the UI group (30.2%), followed by POP + UI (12.9%) and POP (11.6%) (p = 0.004). Notably, most women who participated in physiotherapy before surgery attended just two sessions (36%), followed by one session (20%) or three sessions (20%) (Fig. 2A). Only one person attended 10 sessions. The most used form of therapy before surgery was exercise (72%). Among those who received therapy, 52% rated it as effective, although, as previously mentioned, most had only a single session. The main reasons for not participating in preoperative physiotherapy included lack of awareness about the need for preparation (50.9%), lack of time (19.1%) and logistical/financial difficulties (21.8%). In 6.4% of cases, the physician stated there was no need for physiotherapy. Detailed information on the lack of physiotherapy in individual groups can be found in Table 1.

Table 1. Information on the lack of physiotherapy before surgery in individual groups.

Reason for lack of physiotherapy	Group			
	General [n = 110]	POP [n = 66]	UI [n = 18]	POP + UI [n = 26]
I didn't know that you should prepare for the procedure with a physiotherapist [%]	50.9	57.6	38.9	42.3
I don't have time [%]	19.1	15.2	27.8	23.1
I had no transport or financial means to meet with a physiotherapist [%]	21.8	16.7	33.3	26.9
Doctor said that there was no point [%]	6.4	7.6	0	7.7
I don't have physio in my closed area [%]	1.8	3.0	0	0

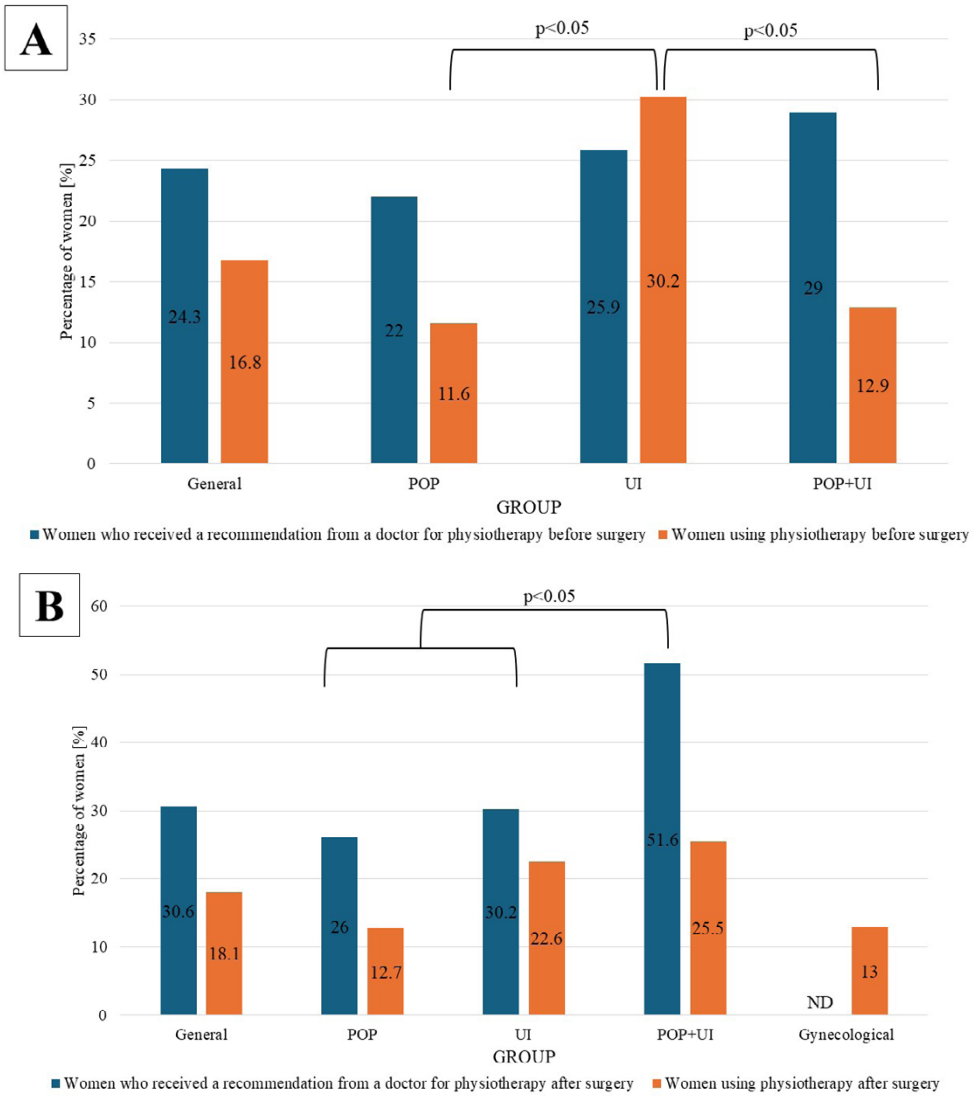

Fig. 2. A. Women who received a prescription for physiotherapy before surgery (General n = 140; POP n = 82; UI n = 27; POP + UI n = 31) and who used physiotherapy before surgery (General n = 232; POP n = 138; UI n = 63; POP + UI n = 31). **B.** Women who received a prescription for physiotherapy after surgery (General n = 232; POP n = 138; UI n = 63; POP + UI n = 31) and who used physiotherapy after surgery (General n = 343; POP n = 150; UI n = 115; POP + UI n = 55; Gynaecological n = 23). ND — no data; p — Chi^2.

After surgery, 30.5% of patients (n = 71) were referred to physiotherapy by a physician, and 18.0% (n = 62) participated. Physiotherapy was most often prescribed to women in the POP + UI group (51.6%), followed by the UI (30.2%) and POP groups (26.1%) (p = 0.021). Postoperative physiotherapy participation was highest among the POP + UI group (25.5%), followed by UI (22.6%), gynaecological (13%) and POP (12.7%) (p >0.05) (Fig. 2B). The most common reasons

for not participating in physiotherapy after surgery were lack of time (34.2%) and lack of awareness (32.2%), with 18.8% reporting transport/financial difficulties and 7.9% believing the in-hospital physiotherapy session was sufficient. Detailed information on the lack of physiotherapy after surgery in individual groups can be found in Table 2. Among the 43 women who underwent postoperative physiotherapy, most attended only one session (65.1%), and only one person attended six sessions. Therapy was most often a combination of manual therapy and exercise (51.4%) or exercise alone (32.4%). The effectiveness of physiotherapy was rated positively by 95.1% of patients.

Table 2. Information on the lack of physiotherapy after surgery in individual groups.

Reason for lack of physiotherapy	Group				
	General [n = 202]	POP [n = 78]	UI [n = 63]	POP + UI [n = 41]	Gynaecological [n = 20]
I didn't know that you should prepare for the procedure with a physiotherapist [%]	32.2	33.3	30.2	36.6	25.0
I don't have time [%]	34.2	26.9	34.9	34.1	60.0
I had no transport or financial means to meet with a physiotherapist [%]	18.8	23.1	14.3	19.5	15.0
Doctor said that there was no point [%]	2.5	0	6.3	2.4	0
I don't have physio in my closed area [%]	4.5	7.7	3.2	2.4	0
I had an appointment with the physiotherapist before or after procedure or in hospital [%]	7.9	9.0	11.1	4.9	0

Before surgery, only 29.8% of patients performed PFMT (Fig. 3). The main reasons for not doing PFMT were lack of knowledge about their existence (65.5%), belief that the upcoming surgery made them unnecessary (21.4%) and lack of awareness of their importance (9.2%). The highest frequency of PFMT was in the POP + UI group (36%), followed by POP (32.5%), UI (30.6%) and the gynaecological group (11.5%) ($p = 0.017$). Importantly, 100% of women who participated in physiotherapy before surgery reported doing PFMT. Among them, 78.6% demonstrated correct exercise technique, compared to only 18.9% among those who did not undergo physiotherapy ($p < 0.001$).

Pelvic floor disorder prevention before surgery was practiced by 62.7% of women. Among those who attended preoperative physiotherapy, 92.9% engaged in preventive behaviours, compared to 54.1% of those who did not ($p < 0.001$). The highest rate of preventive behaviour was in the POP + UI group (83.9%), followed by POP (58.7%) and UI (61.9%) ($p = 0.031$).

After surgery, 51.5% of patients performed PFMT (Fig. 4). The most common reasons for not doing so were the fact of having undergone surgery (54.2%) and lack of knowledge about the exercises (20.8%). The highest rate of postoperative exercise was in the POP + UI group (65.5%), followed by gynaecological (52.2%), POP (49.3%) and UI (47.8%) ($p = 0.038$). Notably, 100% of women who participated in physiotherapy after surgery reported doing PFMT, compared to only 39.2% among those who did not ($p < 0.001$). Among those who had physiotherapy, 73.35% demonstrated correct technique, versus 17.9% without physiotherapy. The exact results of performing PFMT are shown in Fig. 3 and 4.

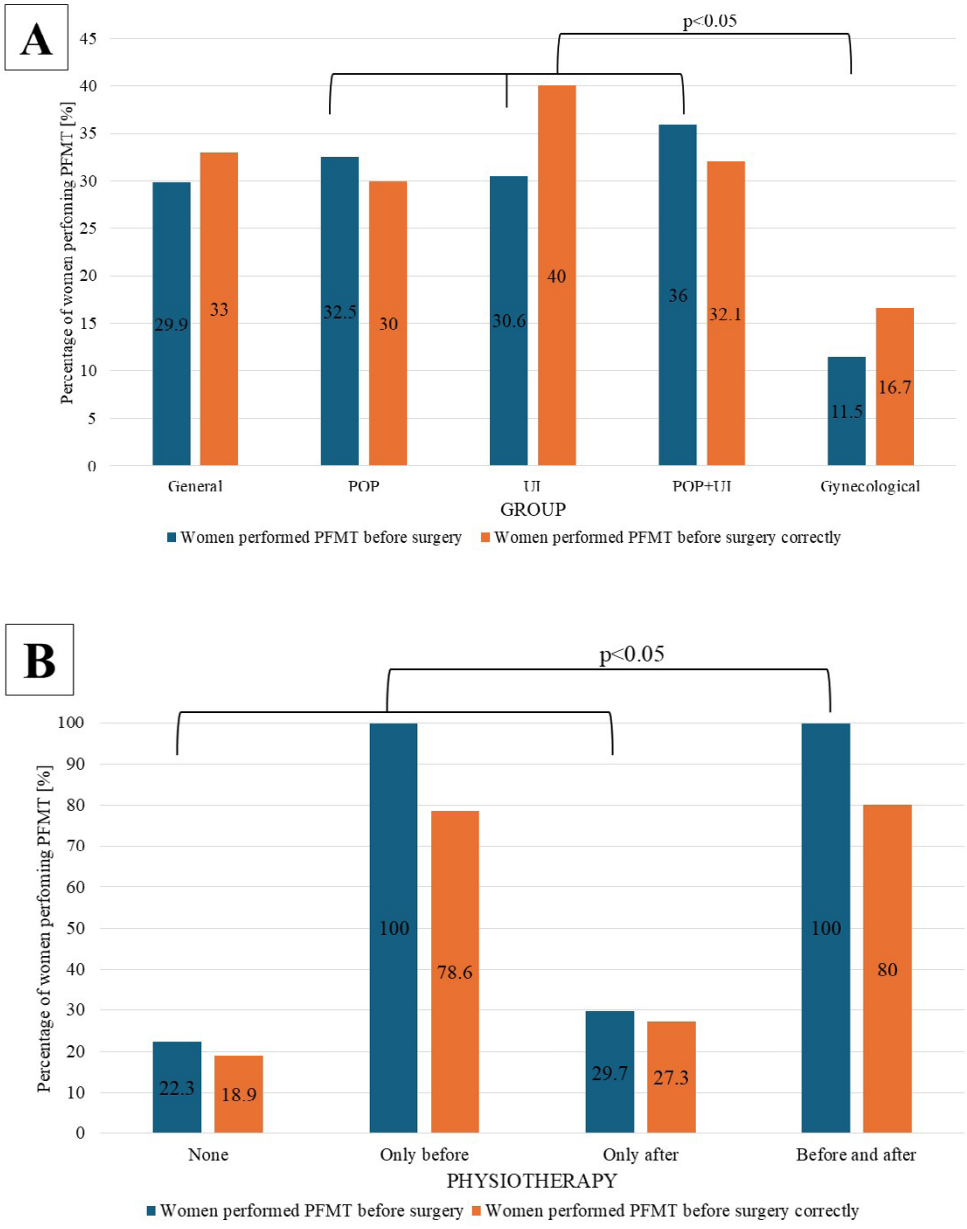

Fig. 3. A. The exact results of performing PFMT before surgery (Pelvic Floor Muscle Training), divided into diseases (General n = 343; POP n = 150; UI n = 115; POP + UI n = 55; Gynaecological n = 23) and correctness of performing PFMT (General n = 40; POP n = 35; UI n = 28; Gynaecological n = 6). **B.** The exact results of performing PFMT before surgery (Pelvic Floor Muscle Training), divided into using physiotherapy (None n = 363; Only before n = 14; Only after n = 37; Before and after n = 25) and correctness of performing PFMT (None n = 74; Only before n = 14; Only after n = 11; Before and after n = 10); p — Chi^2.

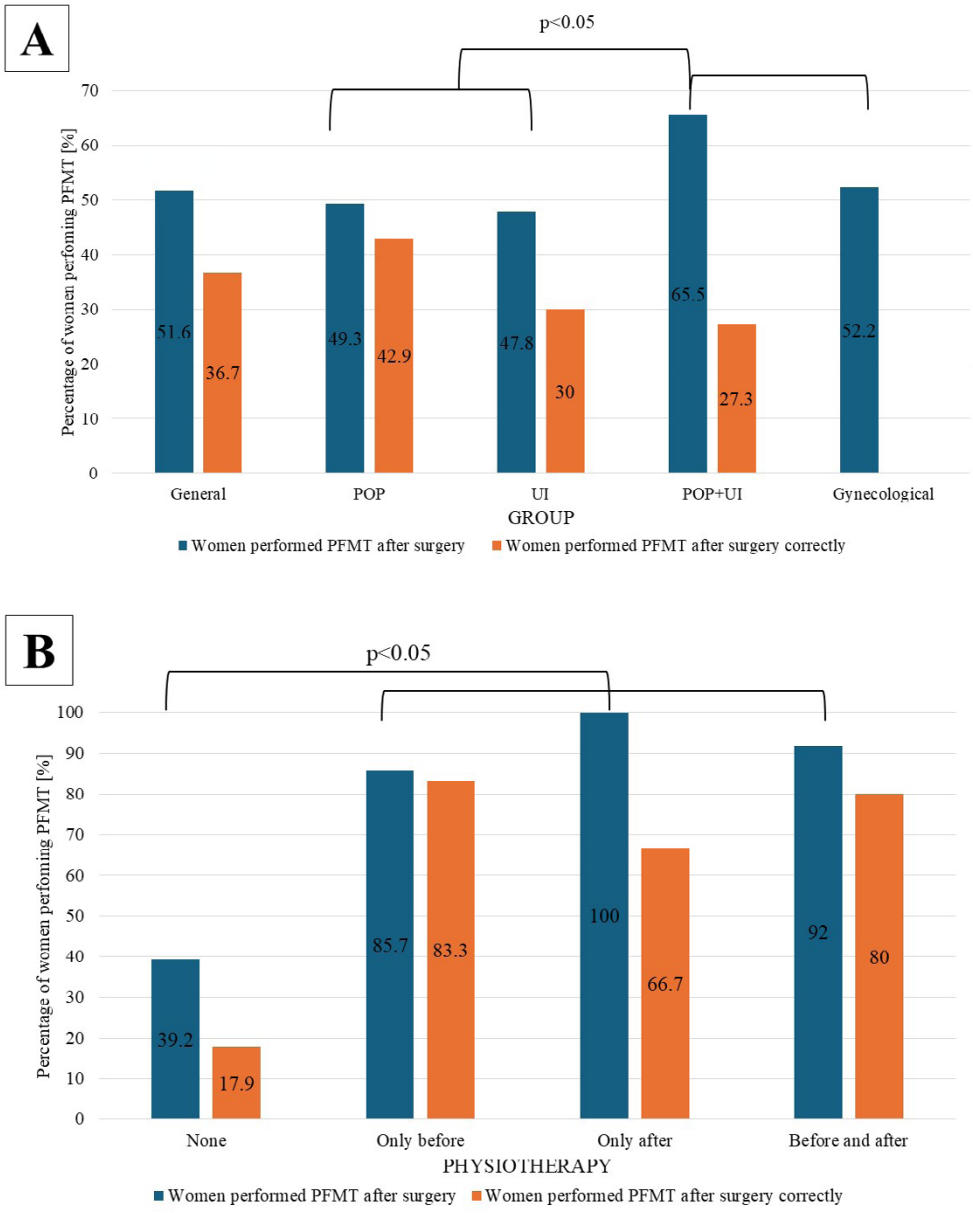

Fig. 4. A. The exact results of performing PFMT after surgery (Pelvic Floor Muscle Training), divided into diseases (General n = 343; POP n = 150; UI n = 115; POP + UI n = 55; Gynaecological n = 22) and correctness of performing PFMT (General n = 98; POP n = 56; UI n = 20; Gynaecological n = 6). **B.** The exact results of performing PFMT after surgery (Pelvic Floor Muscle Training), divided into using physiotherapy (None n = 268; Only before n = 14; Only after n = 37; Before and after n = 25) and correctness of performing PFMT (None n = 67; Only before n = 12; Only after n = 9; Before and after n = 10); p — Chi^2.

Postoperative prevention of pelvic floor disorders was practiced by 68.7% of women. The highest rate was in the POP + UI group (80.6%), followed by POP (70.3%) and UI (58.7%) (p >0.05). Women who participated in physiotherapy were significantly more likely to engage in preventive behaviours (90.9%) than those who did not (63.4%) (p = 0.011).

No statistically significant differences were found between groups regarding return to normal life after surgery (p = 0.737). Most patients, regardless of physiotherapy participation or timing, agreed with the statement that they had returned to normal life. In the group without physiotherapy, 90.9% agreed; physiotherapy only before surgery — 85.7%; only after surgery — 97.2%; both before and after surgery — 96%.

The highest percentage of women who rated their condition as "much better" after surgery was in the group who underwent physiotherapy both before and after surgery (84%). A high percentage was also seen in the group with only preoperative physiotherapy (71.4%). The lowest rates were in those with only postoperative physiotherapy (47.2%) and those who never attended physiotherapy (49.8%) (p = 0.028). Negative ratings were rare but were most common among those who had no physiotherapy (3.4%).

Analysis of the question about whether they would choose surgery again showed a statistically significant correlation with physiotherapy participation (p = 0.003). The highest percentage of "definitely yes" responses was among those who had only preoperative physiotherapy (78.6%) and those with both pre- and postoperative physiotherapy (56%). The lowest was in the group with no physiotherapy (32.7%), with 5% stating they would not choose surgery again.

Regarding recommending surgery to friends or family with similar issues, there were no statistically significant differences between physiotherapy groups (p = 0.229). However, all women who had both pre- and postoperative physiotherapy would recommend surgery, compared to 81.7% of those who had no physiotherapy at all. Detailed answers to questions in individual physiotherapy groups can be found in Table 3.

Table 3. Detailed answers to questions from ICIQ-Satisfaction in individual physiotherapy groups.

Question	Physiotherapy					*p*
	General [n = 338]	None [n = 263]	Only before surgery [n = 14]	Only after surgery [n = 36]	Before and after surgery [n = 25]	
Would you say you have been able to return to a 'normal life' after your surgery? [%]						
strongly agree (or I was not limited before)	57.7	53.6 [a]	78.6 [b]	83.3 [b]	52 [a]	0.033
agree	34.4	37.3 [a]	7.1 [b]	13.9 [b]	44 [a]	
disagree	7.4	8.0 [a]	14.3 [a]	2.8 [a]	4.0 [a]	
strongly disagree	0.9	1.1 [a]	0 [a]	0 [a]	0 [a]	
Would you say you have been able to return to a 'normal life' after your surgery? [%]						
strongly agree (or I was not limited before)	91.7	90.9	85.7	97.2	96	0.737
disagree	7.4	8.0	14.3	2.8	4.0	
strongly disagree	0.9	1.1	0	0	0	

Table 3. Cont.

Question	Physiotherapy					*p*
	General [n = 338]	None [n = 263]	Only before surgery [n = 14]	Only after surgery [n = 36]	Before and after surgery [n = 25]	
Compared to how you felt before your surgery, how is your condition now? [%]						
much better	53.0	49.8 [a]	71.4 [b]	47.2 [a]	84.0 [b]	0.028
a bit better	34.6	37.6 [a]	14.3 [a]	36.1 [a]	12.0 [a]	
about the same	9.5	9.1 [a]	14.3 [a]	16.7 [a]	0 [a]	
a bit worse	3.0	3.4 [a]	0 [a]	0 [a]	4.0 [a]	
If you were in the same situation again, would you still have the surgery? [%]						
yes, definitely	37.9	32.7 [a]	78.6 [b]	47.2 [a,b]	56.0 [a,b]	0.003
yes, probably	46.7	50.6 [a]	7.1 [b]	36.1 [a,b]	44.0 [a,b]	
not sure	10.9	11.8 [a]	0 [a]	16.7 [a]	0 [a]	
no, probably not	3.8	4.2 [a]	14.3 [a]	0 [a]	0 [a]	
no, definitely not	0.6	0.8 [a]	0 [a]	0 [a]	0 [a]	
Would you recommend this surgery to friends or relatives with similar problems? [%]						
yes, definitely	39.3	33.8 [a]	78.6 [b]	50.0 [a,b]	60.0 [a,b]	0.015
yes, probably	45.6	47.9 [a]	14.3 [a]	44.4 [a]	40.0 [a]	
not sure	11.2	13.7 [a]	0 [a]	5.6 [a]	0 [a]	
no, probably not	3.3	3.8 [a]	7.1 [a]	0 [a]	0 [a]	
no, definitely not	0.6	0.8 [a]	0 [a]	0 [a]	0 [a]	
If you had to spend the rest of your life with your symptoms as they are now, how would you feel? [%]						
perfectly happy (or I no longer have any symptoms)	81.4	80.2	64.3	91.7	88.0	0.062
mixed feelings	10.9	12.2	14.3	2.8	8.0	
very unhappy	7.1	7.2	14.3	5.6	4.0	
desperate	0.6	0.4	7.1	0	0	

p = Chi^2; [a,b,c] — Bonferoni correction, different letters indicate statistical differences between groups

Analysis of satisfaction with current health status — if they were to live with current symptoms for the rest of their life — showed most women in all physiotherapy groups declared full satisfaction or symptom-free status (highest rating). The highest rate of such responses was in the group with only postoperative physiotherapy (91.7%), followed by those with no physiotherapy (80.2%) and those with both pre- and postoperative therapy (88%). However, the differences between groups did not reach statistical significance (p = 0.062).

Statistically significant differences in overall satisfaction with surgery were observed between groups of patients who underwent different physiotherapy regimens (p = 0.003). The mean satisfaction score in the group without physiotherapy was 8.10 ± 2.33, in the group with preoperative physiotherapy only, it was 8.29 ± 2.53, in the group with postoperative physiotherapy only, it was

9.50 ± 1.00, and in the group that received both pre- and postoperative physiotherapy, the mean score was 8.72 ± 1.54.

No statistically significant differences were found in the mean PFDI scores between the group of patients who did not undergo physiotherapy and the group that received only postoperative physiotherapy (p = 0.850). In the group without physiotherapy, the mean PFDI score was 54.15 ± 21.52, while in the group with postoperative physiotherapy, it was 53.17 ± 26.39.

Discussion

In the Polish guidelines for the treatment of lower urinary tract dysfunction and pelvic organ prolapse, physiotherapy is not defined as a separate therapeutic pathway, although its components are included as part of conservative management. According to the recommendations of the Polish Gynaecological Society (2011) [23] and the Polish Urogynaecological Society (2014) [16], conservative therapy should last at least 6 months, with an evaluation of outcomes after 2–3 months. Recommended interventions include: weight reduction (Level of evidence: LOE 1b), vaginal oestrogens (LOE 1a), pessary use (LOE 1b), pelvic floor muscle training (PFMT) supervised by a physiotherapist (LOE 1a), bladder training (LOE 2b), electrical stimulation (LOE 1b), biofeedback (LOE 2) and daily education (LOE 3).

The European Association of Urology (2025) guidelines clearly confirm the effectiveness of PFMT in the treatment of stress urinary incontinence (SUI) (LOE 1a) and further recommend electrical stimulation (LOE 1a), bladder training (LOE 1b), weight reduction, acupuncture and pessary use (all LOE 1a) [24]. Similarly, the International Continence Society (2016) recommends at least 12 weeks of PFMT as a first-line therapy for urinary incontinence (UI) (Grade A), as well as pessary use and bladder training in the management of pelvic organ prolapse (POP) (Grade A) [25].

National guidelines across Europe also endorse physiotherapy as first-line treatment. In the UK, NICE recommends supervised PFMT for at least 3 months for urinary incontinence and 4 months for POP (LOE A), as well as biofeedback (LOE B), electrical stimulation (LOE D) and pessaries (LOE A) [26]. Spanish guidelines, modelled on NICE, additionally recommend hypopressive exercises (LOE B) and behavioural therapy (LOE A) [27]. The Danish guidelines (2013) emphasise individualised physiotherapist supervision, weekly sessions for 12 weeks, and the use of techniques such as EMG biofeedback, electrical stimulation and massage [28]. In German-language guidelines, PFMT and electrical stimulation are also recommended, though no minimum treatment duration is specified [29].

While specific recommendations vary by country, physiotherapy is consistently recognised in both international and national guidelines as an effective and recommended form of conservative management for pelvic floor dysfunction. However, the results of this study show that only a negligible percentage of patients participate in physiotherapy due to pelvic floor dysfunction. Moreover, only a few of them received such recommendation from their physician. The high percentage of people unaware of urogynaecological physiotherapy as one of the methods of conservative treatment is also disturbing. Some studies have also assessed the role of physiotherapy in clinical practice. McKinney *et al.* [30] analysed insurance data from over 103,000 women with newly diagnosed UI or mixed incontinence (MUI). Only 2.6% had at least one physiotherapy visit within two years of diagnosis, and 70% did not complete the recommended exercise programme (only 30% completed ≥3 sessions). This highlights the severe underutilisation of PFMT as a first-line

treatment [30]. Similar findings were reported by Shannon *et al.* [31] in a retrospective study of 180 patients, where 66% initiated therapy, but only 29% completed the full session cycle [31]. Fullerton *et al.* [32] found that only about 15–29% of patients continued physiotherapy to the end of the programme. This low adherence and referral rate (only 24% of women awaiting surgery were referred to physiotherapy) significantly limits the potential benefits of PFMT [32].

Mazur-Biały *et al.* [33] surveyed 165 women referred for surgical treatment of UI or POP — 78% had never performed pelvic floor exercises, and only 8.8% had visited a urogynaecological physiotherapist [33]. Similarly, Lubińska-Żądło *et al.* [34] reported a low level of knowledge among hospitalised gynaecology patients regarding risk factors and treatment methods for UI. These findings indicate insufficient education and promotion of pelvic floor prevention, translating into low engagement in physiotherapy [34]. Other studies [13] in 2014 and again in 2019–2020 noted an increase in awareness of urogynaecological physiotherapy — from 32% to 76%. The proportion of women who could identify physiotherapy clinic locations also increased from 9% to 40%. However, the actual percentage of women using rehabilitation services rose only from 9% to 18%. Despite these limitations, it is worth noting that among experienced women's health physiotherapists, the use of PFMT is widespread. A survey by Hagen *et al.* [35] found that 93% of specialists in the UK use individualised PFMT in the treatment of pelvic organ prolapse, often supported by biofeedback. However, major barriers remain — such as the lack of referrals, scepticism among some physicians and limited clinical resources.

Although surgical treatment offers greater effectiveness and longer-lasting results, PFMT remains an attractive, less invasive and more cost-effective option — particularly for patients in the early stages of the condition or those who prefer conservative approaches. The choice of therapeutic strategy should consider not only clinical efficacy but also individual preferences, the patient's overall health status and the organisational and financial capacities of the healthcare system.

There is no doubt that surgical treatment is more effective than conservative physiotherapy. However, as this study shows, satisfaction with the procedure, as well as willingness to recommend it, is significantly higher in patients who underwent physiotherapy than in those who did not. This is particularly evident in the group where physiotherapy was part of the postoperative care. These results are confirmed by the other authors; however, it should be noted that in the current study, participation in physiotherapy was limited to only 1–2 visits, whereas recommendations indicate a 6-month process. Only one patient completed 10 consultations. Jarvis *et al.* [36] showed that women with UI/POP who received perioperative physiotherapy had better outcomes than those who did not [36]. However, Frawley *et al.* [37] found no significant difference in urodynamic outcomes or quality of life between patients who received standard postoperative care and those who underwent an additional physiotherapy program [38]. McClurg *et al.* [39] also noted symptom improvement and increased PFM strength following the addition of PFMT to postoperative care. In a prospective study involving 127 women with various pelvic floor disorders, Huufish *et al.* [40] found that women who underwent surgery were significantly more satisfied with their treatment and were more likely to meet therapeutic goals. In the study by Boyington *et al.* [41], the impact of PFMT on pelvic floor muscle function was compared between women with UI and healthy controls. Although there were no baseline differences in strength or endurance, the post-training improvement was significantly greater in the asymptomatic group (9.53 vs. 5.58; $p = 0.05$). In a study by Szymański [42], PFMT was implemented before surgery in women with SUI. The objective cure rate after 6 months was 75.4%, and the number of daily pads used significantly decreased (from 4.5 to 1.4; $p = 0.002$). However, no correlation was found between functional

muscle assessments and surgical success. Only 33% of patients reported subjective improvement, and there was no information on postoperative activities or behaviours [42].

There is undoubtedly evidence of the positive impact of physiotherapy on surgical outcomes, patient quality of life and well-being. However, research shows that its contribution to the treatment process is still insufficient to fully benefit from its use. Research indicates the need to intensify activities in the field of patient education, as well as in the promotion of urogynaecological physiotherapy among patients in Poland.

Conclusion

1. Awareness of pelvic floor physiotherapy among women with pelvic organ prolapse and/or urinary incontinence remains limited, with the Internet being the main source of information.
2. Participation in physiotherapy, especially preoperative, is associated with better knowledge and correct performance of pelvic floor muscle training.
3. Physiotherapy, both before and after surgery, promotes greater engagement in preventive behaviours and improves patients' subjective assessment of treatment outcomes.
4. The highest level of satisfaction with surgical treatment is observed among patients who participated in postoperative physiotherapy or in both pre- and postoperative phases.

Conflict of interest

None declared.

Author contributions

A.M.-B. conceived the original idea, designed the study, performed the examination, wrote the manuscript, reviewed and supervised; S.T. performed the examination, wrote the manuscript and performed statistical data analysis; K.D.-S. performed the examination and wrote the manuscript; J.S. wrote the manuscript.

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