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Improvements in Physical Activity and Functioning After Undergoing Midurethral Sling Procedure for Urinary Incontinence

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Abstract

Objectives—To estimate the effect of midurethral sling on improving leisure physical activity levels and physical functioning in women with stress urinary incontinence (SUI). Our secondary objective was to identify possible risk factors for postoperative insufficient physical activity.

Methods—We conducted a prospective, observational study of women undergoing outpatient midurethral sling for SUI. Women completed validated questionnaires for incontinence, leisure physical activity, and physical functioning at baseline and 6 months postoperative. The primary outcome was leisure physical activity level. We used multiple logistic and linear regression to estimate the effect of improvements in urinary symptoms and life effect on physical activity levels and physical functioning scores.

Results—Ninety women underwent surgery and 85 returned for follow-up. At baseline, 38% had sedentary, 18% had moderate, and 44% had sufficient leisure physical activity levels. Postoperatively, this modestly improved to 26% sedentary, 20% moderate, and 54% sufficient levels. The median leisure physical activity energy expenditure increased from 396 to 693 metabolic equivalent-minutes/week ($P=.04$). Physical functioning scores also significantly improved (mean score 44 vs 55 points, $P<.001$). On multiple logistic regression, improvements in incontinence life effect were associated with increased odds of leisure physical activity improvement (AOR 1.66; 95% CI 1.08–2.54). On multiple linear regression, improvements in both urinary incontinence severity and effect were associated with improvements in physical functioning scores ($P<.01$ for both). Factors associated with insufficient postoperative physical activity included low baseline physical activity levels, and smaller improvements in urinary effect scores.

Conclusions—Midurethral sling and subsequent improvements in urinary incontinence are associated with improved leisure physical activity levels and physical functioning.

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INTRODUCTION

It is essential for women to remain physically active and functional throughout their lifespan. Physical activity (PA) has important health benefits while physical functioning (PF) is a critical component of quality of life.¹ In 2008 the Department of Health and Human Services published the first Physical Activity Guidelines for Americans, highlighting that regular physical activity throughout life is critical for maintaining good physical health, reducing the risk of adverse health outcomes, and preventing premature death.² These guidelines suggest that although most health benefits occur with 500 metabolic equivalent (MET)-minutes/week or at least 150 minutes of moderate PA per week such as brisk walking, some PA is better than none. In addition, the guidelines advise that adults who participate in any amount of PA gain some health benefits. Despite the well-known benefits of exercise, few Americans do it regularly. Although multiple factors can contribute to low levels of PA on an individual level, urinary incontinence (UI) has been associated with insufficient levels of PA and identified as a potential barrier to exercise in previous studies.^{3, 45}

Physical functioning (PF) is the ability to conduct a variety of activities ranging from self-care to more challenging activities requiring increasing degrees of mobility, strength and endurance.⁶ These activities are not limited to exercise or physical activities solely for health benefits but are a critical component of a woman's quality of life and well-being. Previous work has been done to develop valid and comprehensive measures for PF in the general U.S. population, highlighting the growing recognition of this domain measure.⁷ Studies have shown that UI has an adverse effect on PF, and over 40% of women seeking care for UI report that a primary goal of treatment is to improve PF.^{8, 9} Improving both PF and PA are the most common goals reported by women seeking care for pelvic floor disorders.

Although UI has been associated with decreased PA and PF, it is unclear if treatment is associated with improvement of either aspect. Our primary objective was to estimate the effect of midurethral sling and subsequent improvements in urinary incontinence (UI) symptoms and life effect on improving leisure PA and overall PF in women. Our secondary objective was to identify possible risk factors for postoperative insufficient PA levels.

MATERIALS AND METHODS

We performed a prospective, observational study including a cohort of women electing to undergo midurethral sling for stress UI from the Division of Urogynecology at our tertiary care center. The study protocol was approved by the institutional review board at Women and Infants Hospital of Rhode Island. Enrollment occurred from October 2009 – April 2011. All participating subjects signed informed consent.

Women undergoing outpatient midurethral sling for symptomatic SUI were included. Women were approached and enrolled in the study at their preoperative visit, typically 2–3 weeks prior to their surgery. The study details were reviewed and after informed consent was obtained, participants were asked to give their top 3 goals of SUI treatment. We restricted the study population to women who reported a goal of improving PA and/or PF to address potential confounding issues around motivation and the ability to be physically active, which are otherwise difficult to measure or adjust for. Women without symptomatic and documented SUI, women undergoing other concomitant procedures, and those unwilling or unable (non-English speaking or cognitive barriers) to complete the study questionnaires were excluded. Finally, women over age 69 were excluded because our primary outcome measure for PA was validated in subjects under 69 years (see below).

At baseline all women underwent a complete history and physical examination, including the pelvic organ prolapse quantification (POPQ) exam.¹⁰ Preoperative multichannel urodynamics were performed as clinically indicated, but all women had confirmed SUI based on either urodynamics or positive cough stress test. At baseline and 6 months postoperative, all women completed the International Physical Activity Questionnaire- Long Form (IPAQ),^{11, 12} the National Institutes of Health Patient-Reported Outcomes Measurement Information System (PROMIS) Physical Functioning questionnaire¹³, PROMIS Social and Mental Health questionnaires, the Pelvic Floor Distress Inventory short form (PFDI-20),¹⁴ the Pelvic Floor Impact Questionnaire short form (PFIQ-7), the Body Image Scale (BIS),¹⁵ and an open ended question regarding treatment goals. Postoperatively, women also answered questions regarding their exercise behaviors including whether they belonged to a weight loss program or gym, the frequency of going to the gym, and interest in a postoperative transitional PA or exercise program. Patients underwent outpatient midurethral sling procedures as scheduled (either retropubic or transobturator approach) and underwent routine peri-operative and post-operative care. Postoperatively, patients were routinely advised to limit heavy physical activities for 3–4 weeks during recovery.

Physical activity was measured using the IPAQ, which has been validated in multiple populations aged 15–69 years. The IPAQ estimates the amount of time spent performing PA in the past 7 days.¹² It can also be used to determine frequency per week and duration of PA per day. Subsequently, each level of activity is assigned a metabolic energy requirement score (MET) and a MET-minute/week is computed. One MET is proportional to the energy expended while sitting quietly. The IPAQ covers 5 domains: 1) job-related physical activity; 2) transportation physical activity; 3) domestic physical activity; 4) leisure-time physical activity; and 5) time spent sitting. The items in the IPAQ long form are structured to allow estimation of separate domain-specific scores and activity specific sub-scores. According to guidelines, subjects reporting greater than 16 hours of moderate or vigorous time variables are considered outliers and excluded. We were specifically interested in leisure PA levels, as this domain comprises a larger interest for public health promotion² and is associated with improved health outcomes.^{16, 17} We categorized leisure PA based on the DHHS Physical Activity Guidelines for Americans as sedentary (0 MET-min/week), moderate (1–499 MET-min/week), or sufficient (≥ 500 MET-min/week).

We measured PF using the NIH PROMIS Physical Functioning questionnaire, which has undergone rigorous validation and calibration.⁶ The PROMIS PF questionnaire is a generic, multidimensional measure accounting for PF capability, limitation and motivation and does not measure actual performance of physical activities. The PROMIS PF raw scores are translated into a “T-score”, which rescales and standardizes the score where the mean U.S. general population score is fixed at 50 points and SD fixed at 10. A PROMIS PF score greater than 50 points indicates better health and function compared to the U.S. general population; a lower score indicates worse function.

Our primary outcome was leisure PA level, with improvement defined as improving from a baseline sedentary level to moderate or sufficient level, or improving from a baseline moderate level to sufficient level at 6 months postoperative. This definition excluded women who started at sufficient levels and stayed the same. However, women who started at sufficient levels could worsen, and these women were included in the “did not improve” category along with women who started as sedentary or moderate and stayed the same or worsened. We also evaluated improvement in PROMIS PF scores postoperatively. Our exposure, treatment and improvement of urinary symptom severity and life impact, was defined as improvement in the urinary subscales of the PFDI-20 and PFIQ-7 six months after midurethral sling. The Urinary Distress Inventory (UDI-6) is the urinary subscale

which measures symptom severity and bother and the Urinary Impact Questionnaire (UIQ-7) is the urinary subscale which measures the life effect of urinary symptoms.

We conducted a series of regressions to estimate the effect of improvement in urinary symptoms and life impact on PA and PF. Women who were lost to follow-up were not included in any analyses. We used multiple logistic regression to estimate the effect of improvement in UDI-6 and UIQ-7 scores on improvement in leisure PA levels and to identify risk factors for postoperative insufficient (either sedentary or moderate) PA levels. We used multiple linear regression to estimate the effect of improvement in UDI-6 and UIQ-7 scores on improvement in PF scores. Potential confounders were included in models based on known causal associations from the literature and significant changes in statistical estimates. We assumed that 40% of women would have insufficient leisure PA levels at baseline³ and that of these women 25% would improve to moderate or sufficient PA levels after surgery. We also assumed that 60% of women would have moderate or sufficient PA levels at baseline and that of these, 5% would worsen after surgery. Using McNemar's test for paired data with a two-sided alpha of 0.05, 75 women would provide 90% power with these assumptions. To account for withdrawal prior to surgery (estimated 5%), loss to follow-up (5%), and possible ineligible baseline IPAQ scores (5%), we aimed to recruit 96 women. All statistical analyses were performed using SAS version 9.2 (SAS Institute, Cary, NC)

RESULTS

We enrolled 96 women and 90 underwent the scheduled midurethral sling surgery. Of the women who underwent surgery, 85 (95%) women returned for 6 month follow-up. At baseline, 32 women (38%) had sedentary leisure PA levels, 15 (18%) had moderate, and 38 (44%) had sufficient leisure PA levels. Therefore, for PA levels, 47/85 (55%) of the study population could potentially improve in their PA levels from baseline. The mean baseline PROMIS PF score was 44 (± 7), indicating lower PF in this study population of women with UI relative to the general U.S. population. The mean age was 49 years (± 8), BMI was 31 kg/m² (± 7), 95% of women were White, 98% were high school graduates or above, and 30% had a comorbidity including cardiovascular or pulmonary disease, hypertension, or depression. At the preoperative visit, none of the women were utilizing other forms of SUI treatment such as pelvic floor therapy or continence pessary. Only 6 women had prior urogynecologic procedures. Seventy-eight percent of women underwent retropubic, and 22% transobturator midurethral sling. There was 1 intraoperative bladder perforation, 1 woman had urinary retention >3 days, which resolved after 1 week, and 1 woman required return to the operating room for revision due to mesh exposure. Additional demographic and clinical characteristics by leisure PA categories are presented in Table 1.

Postoperatively, a total of 28 women (33%) had some level of improvement in PA levels and overall PA levels modestly improved to 26% sedentary, 20% moderate, and 54% sufficient levels ($P=.2$). Considering only women with baseline sedentary or moderate levels who could demonstrate some improvement, 28/47 (60%) had some level of improvement. The median energy expenditure spent performing leisure PA increased from 396 to 693 MET-min/week postoperatively ($P=0.04$). There was no significant improvement in any of the other IPAQ domains ($P>.05$ for work, transportation, domestic, and sitting domains).

Table 2 presents the changes in leisure PA categories postoperatively. Of the women who were sedentary at baseline, 8/32 (25%) improved to moderate levels and 13/32 (41%) improved to sufficient levels postoperatively. Of the women who had baseline moderate PA levels, 7/15 (47%) improved to sufficient levels, 5/15 (33%) worsened to sedentary levels, and 3/15 (20%) stayed the same. Of the women who had sufficient levels at baseline, 6/38

(16%) worsened to moderate, 6/38 (16%) worsened to sedentary levels postoperatively, and the majority (69%) remained the same ($P=.2$). There were no differences in age, comorbidities, race, body mass index, or UI type between women who did and did not improve. Based on patient responses to the UDI-6, 12 women (14%) reported some degree of persistent SUI symptoms. There was no difference in the proportion of women who reported persistent SUI versus those who did not in terms of PA level improvement (40% versus 49% respectively, $P=0.7$). However, women who reported persistent SUI had significantly lower PF improvements postoperatively compared to continent women (mean improvement 5 versus 12 points, $P=.003$).

Postoperatively, the overall proportion of women who were in weight loss (13%) or exercise (7%) programs was low and this did not differ between women who did and did not improve in PA levels. A higher proportion of women who improved regularly attend a gym compared to women who did not improve, although this did not reach statistical significance (80% versus 20%, $P=.07$). In addition, a higher proportion of women who did improve in PA levels reported they would be interested in a postoperative transitional exercise program compared to women who did not improve (82% versus 45%, $P=.004$). Of note, almost half of women who did not improve would be interested also.

For PF, PROMIS PF scores improved significantly from baseline to 6 months with a mean improvement of 11 points (± 7), $P<.0001$, bringing the overall study population mean to scores slightly higher than the general U.S. population. For urinary symptoms, the mean improvement in UDI-6 scores was 43 points (± 24) and UIQ-7 scores was 35 points (± 24), $P<.0001$ for both. Mean UDI-6 improvement was not significantly associated with improved PA levels (mean UDI-6 improvement of 48 ± 21 vs 39 ± 25 points respectively, $P=0.1$); however the mean change in UIQ-7 scores was significantly higher in women who did improve in PA versus those who did not (mean UIQ-7 improvement of 43 ± 22 vs 28 ± 22 points, respectively, $P=0.008$).

The effect of improvement in UI symptoms and life impact on PA is presented in Table 3. On multiple logistic regression, each 16 point improvement in UIQ-7 was associated with an increased odds of improving in leisure PA levels (AOR 1.66; 95% CI 1.08–2.54) adjusting for age and BMI. Improvements in UDI-6 were not associated with improved PA levels (AOR 1.16, 95% CI 0.89–1.50). UI effects on PF are presented in Table 4. On multiple linear regression, each 11 point improvement in UDI-6 was associated with a mean improvement of 0.95 points in PROMIS PF scores (95% CI 0.27–1.64, $P=.007$) and each 16 point improvement in UIQ-7 was associated with a mean improvement of 1.99 points (95% CI 1.11–2.87, $P<.001$), adjusting for age, BMI, and baseline IPAQ level. Risk factors associated with insufficient postoperative PA levels included baseline overall low PA levels, and smaller improvements in UIQ-7 scores (Table 5).

DISCUSSION

In women who report a goal of improving physical function, surgical treatment of SUI and subsequent improvements in urinary symptoms and life effect are associated with modest improvements in physical activity levels and significant improvements in physical functioning. Postoperatively, 54% of women had sufficient leisure PA levels compared to 44% preoperatively. Overall 33% of women had improvement and 20% had some degree of worsening in PA levels.

There are few prospective studies evaluating the effect of surgical treatment for SUI on PA levels. A study by Stach-Lempinen et al included 53 women with SUI, 27 of whom underwent primarily colposuspension.¹⁸ At baseline, only 25% of women participated in

regular exercise and this did not significantly improve after treatment. Nygaard et al performed a study evaluating surgical treatment of pelvic organ prolapse on PA levels and found that 36% of women increased, 47% did not change, and 18% decreased their PA intensity from baseline.¹⁹ Although this study did not specifically evaluate the effect of SUI treatment, the findings are similar to our study. Both studies support that in select women, pelvic floor disorders may be a significant barrier to PA and that treatment can lead to improvements in PA levels.

The relationship between PA and UI is complex and likely bi-directional. Studies have suggested that UI can lead to self-imposed restrictions on PA to avoid embarrassment and inconvenience. A cross-sectional study of women aged 18–60 years by Nygaard et al found that women with severe UI were 2.64 times more likely to be insufficiently active compared to continent women.³ An Australian cross-sectional analysis found that 38% of women with UI avoided sporting activities because of leaking urine.⁵ In the other direction, community-based studies have demonstrated that maintaining an active lifestyle reduces the risk of developing UI.^{20, 21} It is possible that in women without UI, maintaining an active lifestyle can decrease the risk of UI; however, in women who have UI, it may serve as a barrier to exercise. Even in women who are sufficiently active, UI may negatively affect their satisfaction with physical activities or cause them to limit the activities they choose to participate in.^{22, 23}

Other than UI, there are multiple other potential barriers including personal, social, economic and environmental factors. Factors negatively associated with PA may include advanced age, lack of time and motivation, overweight or obesity, perception of poor overall health, lack of social support or transportation, and being disabled. Healthy People 2020 has a multidisciplinary approach to promoting PA with several approaches to address these numerous factors.²⁴ Although UI may be only one of multiple reasons for low PA levels in many women, we found that 36% of women had some improvement in PA levels after treatment of SUI. Therefore in some women, UI alone can be a significant barrier to maintaining an active lifestyle.

Previous cross-sectional studies support that PA, particularly leisure PA and total PA level, is associated with improved quality of life though physical, mental, and social health domains.^{1, 25} In our study population, women had lower physical functioning scores relative to the U.S. general population prior to treatment. Following surgery, women improved in their PF to levels comparable to the U.S. general population. This suggests that although improved PA is associated with improved physical health, women can experience improvements in PF even if their total PA and leisure PA levels are unchanged. This is an important point, because even if women do not improve their PA to levels that are "sufficient", they can still experience improved physical functioning after SUI treatment.

There are limitations to our study. As there are many possible barriers to PA, we are not able to quantify the contribution of SUI treatment to improvements in PA or PF. Precisely defining and measuring "adequate PA" is extremely difficult. In scientific terms, total weekly PA levels ranging from 500–1,000 MET-min/week produces substantial health benefits for adults; however, translating this into terms the public can easily understand is difficult. Our definition of PA was strict in that we only evaluated improvements in leisure PA levels, although the recommended activity levels can also be met by including transportation and domestic physical activities. After categorizing women into the 3 PA levels, some subgroups were small decreasing the statistical power of some of our comparisons. Although we only included women who stated improvement in PA and/or PF was a treatment goal, we did not assess stages of behavioral change or readiness for increasing PA participation (eg: precontemplation, contemplation, preparation, action, or

maintenance stages). The IPAQ estimates PA levels over the past 7 days, and therefore fluctuations in PA levels week to week are not captured. We also do not know if women had sustained improvement in PA or PF beyond 6 months. The strengths of our study include that it was prospective and we used validated measures to assess PA levels and PF. This study addresses a gap in the current literature and research that helps to identify barriers to PA and an active lifestyle are highly important.

In conclusion, this study examines the important question of whether surgical treatment of SUI significantly improves leisure PA and overall physical functioning. Our data suggest that while a significant number of women will improve their leisure PA levels, not all women will, highlighting the multi-factorial and complex determinants of exercise and PA. However, increased leisure-time PA of any quantity is an important step to meeting the DHHS guidelines. Furthermore, although some women may not improve their PA levels, they can expect to have significant improvements in PF. Moving forward, it is possible that the postoperative period may serve as a “teachable” moment and that many women may benefit from a transitional exercise program after treatment of SUI, especially since the overall number of women expressing interest for such a program was high. Research should be directed at developing effective ways to promote habitual physical activity, especially in middle and later life. Identification of factors that can facilitate women’s participation in physical activity can help to yield substantial public health benefits given the growing number of aging women and anticipated increase in pelvic floor disorders.

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Table 1

Baseline Patient Characteristics by Leisure Physical Activity Category (n=85)

Variable	Leisure Physical Activity Category			
	Sedentary (0 MET min/week)	Moderate (1–499 MET min/week)	Sufficient (≥ 500 MET min/week)	<i>P</i>
Total	32 (37.6)	15 (17.6)	38 (44.7)	--
Age (mean, SD)	49.6 (7.4)	46.5 (9.5)	49.6 (8.2)	0.4
Race White Nonwhite	1 (96.9) 1 (3.1)	14 (93.3) 1 (6.7)	36 (94.7) 2 (5.3)	0.8
Body mass index (mean, SD)	31.9 (6.3)	32.2 (9.8)	28.7 (6.2)	0.1
Baseline anticholinergic use	3 (9.4)	1 (6.7)	1 (2.6)	0.5
PFDI-20 (mean, SD)	88.8 (51.2)	86.7 (56.0)	83.9 (53.1)	0.9
UDI-6 (mean, SD)	52.9 (21.4)	53.1 (25.0)	51.8 (21.4)	1
PFIQ-7 (mean, SD)	50.3 (51.9)	58.7 (53.4)	48.1 (42.4)	0.8
UIQ-7 (mean, SD)	38.7 (24.5)	41.0 (21.2)	37.5 (25.8)	0.9
PROMIS physical function T-score (mean, SD) *	42.0 (6.0)	41.2 (6.0)	47.0 (6.2)	<0.001

Data are n (%) unless otherwise specified.

MET, metabolic equivalent task; SD, standard deviation; PFDI, Pelvic Floor Distress Inventory; UDI, Urinary Distress Inventory; PFIQ, Pelvic Floor Impact Questionnaire; UIQ, Urinary Impact Questionnaire; PROMIS, Patient-Reported Outcomes Measurement Information System

* Lower scores reflect poorer physical functioning relative to the U.S. general population.

Table 2

Changes in Leisure Physical Activity Levels After Midurethral Sling

Preoperative Leisure Physical Activity Level		Postoperative Leisure Physical Activity Level		
	Total N=85	Sedentary (0 MET min/week)	Moderate (1–499 MET min/week)	Sufficient (500 or More MET min/week)
Sedentary	32	11 (34.4)	8 (25.0)	13 (40.6)
Moderate	15	5 (33.3)	3 (20.0)	7 (46.7)
Sufficient	38	6 (15.8)	6 (15.8)	26 (68.4)

MET, metabolic equivalent task.

 $P=0.2$ by Cochran-Mantel-Hansel test

Table 3

Multiple Logistic Regression for Effect of Improvement in Urinary Incontinence on Leisure Physical Activity Levels * (n=59)

Variable	Change in Urinary Symptom Severity on Improvement in Physical Activity Level (AOR, 95% CI)	Change in Urinary Life Effect on Improvement in Physical Activity Level (AOR, 95% CI)
UDI-6 decrease, per 11 points	1.16 (0.89–1.50), <i>P</i> =0.3	--
UIQ-7 decrease, per 16 points	--	1.66 (1.08–2.54), <i>P</i> =0.02
Age, per 5 years	0.76 (0.53–1.08), <i>P</i> =0.1	0.77 (0.54–1.10), <i>P</i> =0.2
BMI, per 5 units	1.34 (0.86–2.07), <i>P</i> =0.2	1.28 (0.83–1.96), <i>P</i> =0.3

AOR, adjusted odds ratio; UDI, Urinary Distress Inventory; UIQ, Urinary Impact Questionnaire; BMI, body mass index.

* Total of 28 women had improved physical activity levels. Women with baseline sufficient physical activity levels who stayed the same were excluded from the model. Separate models were used for effect of UDI-6 and Urinary Impact Questionnaire UIQ-7.

Table 4

Multiple Linear Regression for Effect of Improvement in Urinary Incontinence on Patient-Reported Outcomes Measurement Information System Physical Functioning Scores* (N=85)

Variable	Change in Urinary Symptom Severity on Improvement in Physical Function (Slope, 95% CI, <i>P</i> -value)	Change in Urinary Life Effect on Improvement in Physical Function (Slope, 95% CI, <i>P</i> -value)
UDI-6 decrease, per 11 points	0.95 (0.27, 1.64), <i>P</i> =0.007	-----
UIQ-7 decrease, per 16 points	----	1.99 (1.11, 2.87), <i>P</i> <0.0001
Age, per 5 years	-0.99 (-1.91, -0.07), <i>P</i> =0.04	-1.12 (-1.95, -0.29), <i>P</i> =0.009
BMI, per 5 units	-0.65 (-1.68, 0.38), <i>P</i> =0.2	-0.82 (-1.78, 0.15), <i>P</i> =0.1
Baseline IPAQ category Low Moderate to High	5.65 (1.03, 10.27), <i>P</i> =0.02 Ref.	5.63 (1.32, 9.94), <i>P</i> =0.01 Ref.

CI, confidence interval; UDI; Urinary Distress Inventory; UIQ, Urinary Impact Questionnaire; BMI, body mass index; IPAQ, International Physical Activity Questionnaire.

* Separate models for effect of UDI-6 and UIQ-7.

Table 5

Multiple Logistic Regression to Identify Risk Factors for Insufficient Physical Activity Levels After Midurethral Sling (n=85) *

Variable	Crude Odds Ratio, 95% CI	Adjusted Odds Ratio, 95% CI
UDI-6 decrease, per 11 points	0.90 (0.73–1.10), <i>P</i> =0.3	1.11 (0.85–1.45), <i>P</i> =0.4
UIQ-7 decrease, per 16 points	0.69 (0.50–0.95), <i>P</i> =0.02	0.61 (0.41–0.92), <i>P</i> =0.02
Age, per 5 years	1.32 (1.00–1.75), <i>P</i> =0.05	1.37 (1.01–1.87), <i>P</i> =0.05
Baseline IPAQ category Low Moderate to High	4.81 (0.94, 24.71), <i>P</i> =0.06 Ref.	7.13 (1.18–42.91), <i>P</i> =0.03 Ref.

UDI; Urinary Distress Inventory; UIQ, Urinary Impact Questionnaire; CI, confidence interval; IPAQ, International Physical Activity Questionnaire.

* Model includes 39 women with insufficient postoperative physical activity level.