

The Role of Pelvic Floor Training in Men, Post Prostate Cancer Treatment



Iwona Kasior^{1*} and Ewa Zasadzka²

¹Department of Physical Therapy, College of Nursing and Allied health Sciences, Howard University, Washington DC

²Department of Occupational Therapy, Poznan University of Medical Sciences, Poznan, Poland

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*Corresponding author: Iwona Kasior, Department of Physical Therapy, College of Nursing and Allied health Sciences, Howard University, Washington DC

Abstract

Prostate cancer is the second most common male cancer in the United States, in terms of death rate. One of the treatments is surgical intervention. Although it is often a lifesaving procedure, many patients experience negative physical and psychological side effects that impair their quality of life. Most common side effects are urinary incontinence, sexual dysfunction, anxiety, and depression. One of the physical therapy interventions is pelvic floor exercises (PFE). Research have documented that PFE prior to and post-surgery have been effective in improving quality of life among this population.

Keywords: Prostate; Cancer; Pelvic Floor Exercises; Self-Management Strategies; Cancer Survivors

Abbreviations: PFE: Pelvic Floor Exercises

Introduction

Prostate cancer is the second most common male cancers in the United States in terms of death rate. One of the treatments is a surgical intervention. Although it is often a lifesaving procedure, many patients experienced negative physical and psychological side effects that impair their quality of life. Most common side effects are urinary incontinence, sexual dysfunction, anxiety, and depression. Urinary incontinence may severely undermine quality of life. Incontinence is a major debilitating health condition resulting from prostate cancer surgery. Almost 90% of men post-prostatectomy experience different degrees of urinary incontinence, which is associated with difficulties maintaining hygiene, sexual dysfunction, social isolation, and overall low self-esteem. These issues may lead to psychological problems such as anxiety and depression.

One of the physical therapy interventions to alleviate these problems is activating and strengthening the pelvic floor muscle. Although, there is no regular guidance for specific exercises, several interventions were tested and proposed as a low-cost intervention for patients with post-surgical urinary incontinence. This program usually includes isometric contraction of the pelvic floor muscle, resistance band training. Exercises strengthening

pelvic girdle which by irradiation improve deep pelvic floor muscles by irradiation.

The objective of this mini review was to evaluate the efficacy of pelvic floor muscle training for improving urinary incontinence, sexual dysfunction, anxiety, depression, and overall quality of life after a prostatectomy.

Discussion

Men treated for prostate cancer experience symptoms of urinary incontinence, urinary tract irritation, bowel problems, and sexual dysfunction. Understanding patients' experiences with symptoms and identifying strategies to manage these symptoms are essential in symptom management planning. One strategy that helps patients is physiotherapy and muscle training.

Pelvic Floor Muscle Training and Urinary Incontinence

According to Joanne E. Milios et al. [1] pelvic floor muscle training for patients with post-prostatectomy incontinence is an essential rehabilitative approach, but the evidence base is still emerging. The researchers developed an innovative pelvic floor muscle training program focused on engaging fast and slow twitch

muscle fibers. Joanne E. Milios et al hypothesized that this training, initiated pre-surgically, would improve pelvic floor muscle training function and decrease post-prostatectomy incontinence, when compared to a control group. In this randomized trial, 97 men undergoing radical prostatectomy were assigned to two groups: a control group receiving low-intensity rehabilitation and an intervention group. Both training sessions started 5 weeks before surgery and continued for 12 weeks after surgery. An initial assessment was performed before surgery and then at 2, 6, and 12 weeks after surgery. Participants in the control group showed worse urinary continence results ($p < 0.05$) compared to the intervention group, suggesting a positive effect of pelvic floor exercises initiated before prostate surgery, leading to a positive impact on the quality of life related to urinary incontinence [1].

Symptom Self-Management

Chao-Pin Hsiao et al. [2] conducted a descriptive, cross-sectional study with 53 men, 3 months post-treatment initiation, to examine the association between symptoms, symptom distress, and self-management strategies related to urinary incontinence, bowel, and sexual dysfunction. The results showed significant correlations between symptoms and symptom-related distress ($r = 0.67$, $p < 0.001$). Frequency of symptoms was significantly associated with self-management strategies for urinary ($b = 0.50$, $p < 0.001$), bowel ($b = 0.71$, $p < 0.001$), and sexual dysfunction ($b = 0.28$, $p = 0.005$). Effective self-management methods included using sanitary pads, doing pelvic floor exercises for incontinence, rest, and endurance for bowel problems, and expressing feelings and exploring different ways to express love and affection for sexual dysfunction. These insights help healthcare providers develop approaches to improve health-related quality of life for prostate cancer patients [2].

Impact on Depression and Quality of Life

Katarzyna Strojek et al. [3] assessed the impact of pelvic floor muscle exercises on improving urinary incontinence in 37 men after a radical prostatectomy. Participants were randomly assigned to an experimental group (EG), which participated in supervised pelvic floor exercises twice a week for 12 weeks, and a control group (CG), which did not receive any intervention. The experimental group showed a statistically significant reduction in depressive symptoms and significant improvement in quality of life in each domain of the EPIC-26 questionnaire, as compared to the control group. These findings suggest that pelvic floor exercises are an effective method of treating urinary incontinence and improving quality of life and mental health in men after a radical prostatectomy [3].

Behavioral Therapy and Mood Improvement

Research by Amy Y. Zhang et al. [4] on prostate cancer survivors who received behavioral therapy for urinary incontinence showed significant improvement in mood. The study included 153

prostate cancer survivors with persistent urinary incontinence randomly assigned to receive usual care or an intervention that provided pelvic floor muscle exercises and self-management skills. Measures of anxiety, depression, and anger were taken at baseline, 3 months (post-intervention), and 6 months (follow-up). The results indicated that a significant reduction in daily spill frequency at 3 months predicted lower anxiety levels at 6 months ($p < 0.01$). The interaction between group and leakage had a significant effect on anxiety levels at 3 months; intervention participants with significant leakage reduction demonstrated considerably less anxiety at 6 months ($p = 0.04$). Additionally, age, employment status, and undergoing surgery at baseline were significantly linked with less anxiety, depression, and anger after 6 months. The study concluded that decreased urinary incontinence significantly predicts reduced anxiety, especially among those receiving the intervention, highlighting the association between behavioral therapy for urinary incontinence and anxiety reduction in prostate cancer survivors [4,5].

Conclusion

Pelvic floor muscle training and related physical therapy interventions are effective in improving urinary incontinence, sexual dysfunction, anxiety, depression, and overall quality of life in men after prostatectomy. Initiating these exercises before surgery and continuing postoperatively, involving partners in the planning and adherence of exercise regimens, and employing self-management strategies, can significantly enhance patient outcomes. Future research should continue to explore these interventions to establish standardized guidelines and further improve the quality of life for prostate cancer survivors.

References

1. Milios JE, Ackland TR, Green DJ (2019) Pelvic floor muscle training in radical prostatectomy: a randomized controlled trial of the impacts on pelvic floor muscle function and urinary incontinence. *BMC Urology* 19(1): 116.
2. Hsiao CP, Moore IM, Insel KC, Merkle CJ (2014) Symptom self-management strategies in patients with non-metastatic prostate cancer. *J Clin Nurs* 23(3-4): 440-449.
3. Strojek K, Weber-Rajek M, Straczynska A, Piekorz Z, Pilarska B, et al. (2021) Randomized-Controlled Trial Examining the Effect of Pelvic Floor Muscle Training in the Treatment of Stress Urinary Incontinence in Men after a Laparoscopic Radical Prostatectomy Pilot Study. *J Clin Med* 10(13): 2946.
4. Zhang AY, Ganocy S, Fu AZ, Kresevic D, Ponsky L, et al. (2019) Mood outcomes of a behavioral treatment for urinary incontinence in prostate cancer survivors. *Support Care Cancer* 27(12): 4461-4467.
5. Pan LH, Lin MH, Pang ST, Wang J, Shih WM (2019) Improvement of Urinary Incontinence, Life Impact, and Depression and Anxiety with Modified Pelvic Floor Muscle Training After Radical Prostatectomy. *Am J Mens Health* 13(3): 1557988319851618.



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