

## LITERATURE REVIEW

# The role of physiotherapy in sexual health: Is it evidence-based?

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### Abstract

Pelvic floor rehabilitation has demonstrated efficacy in the treatment of urinary incontinence. The use of pelvic floor rehabilitation to treat sexual dysfunction, and the inclusion of physiotherapists in the team of professionals involved in promoting sexual health and treating sexual problems, are relatively recent advancements. A literature review revealed that, while a recognized role exists for physiotherapists in the multidisciplinary field of sexual health, more studies are need to validate the efficacy of treatment.

*Keywords:* biofeedback, dyspareunia, erectile dysfunction, pelvic floor, premature ejaculation, sexual dysfunction, sexual health, sexual pain disorders, vaginismus.

### Introduction

Sexual health is a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity (WHO 1975). Professionals involved in sexual health have traditionally included educators, counsellors, therapists and physicians, particularly those in specialties such as psychiatry, gynaecology and urology. Physiotherapists are not generally included amongst these disciplines. However, physiotherapists are trained to provide treatment to restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients suffering from injuries or disease (Bureau of Labor Statistics, U.S. Department of Labor 2002). As community health professionals, physiotherapists are involved in health and fitness education and promoting wellness. Since sexual health is an integral component of overall wellness, and sexual activity a valued human activity, physiotherapists in various settings have an important role to play in promoting sexual health and treating dysfunction.

### The pelvic floor and sexuality

Because of the intrinsic role of the pelvic floor in the sexual function of both men and women,

physiotherapists with advanced training in pelvic floor rehabilitation are most likely to be directly involved in the treatment of sexual dysfunction. However, the comfort level and sexual knowledge amongst physiotherapists varies according to their individual training and experience (Conine *et al.* 1979). A detailed sexual history is not necessarily a standard component of the history-taking process in evaluating and treating patients presenting with complaints of urogenital dysfunction. However, physiotherapists treating patients with urinary incontinence and prolapse secondary to pelvic floor weakness should be aware of the extent to which these conditions may impact on sexual function. Impaired sexual arousal is significantly associated with lower urinary tract symptoms (LUTS), and 40–46% of women with LUTS suffer from impairment in their sex lives (Salonia *et al.* 2004). In a clinical trial, one-third of patients with prolapse reported that their pelvic floor condition affected their ability to have sexual relations (Barber *et al.* 2002). Low libido, vaginal dryness, painful intercourse, decreased orgasm rates and intensity, and decreased overall sexual satisfaction have been reported in women with urinary incontinence (Handa *et al.* 2004). The relationship between urological and sexual problems has prompted the suggestion that women with urinary problems should be questioned about their sexual function (Pauls & Berman 2002).

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### **Incontinence during sexual activity**

Pelvic floor hypotonus and stress urinary incontinence (SUI) may have a significant impact on sexual function when there is leakage during sexual activity. Urinary leakage can occur either during penetration, during orgasm or both. The pathophysiology leading to incontinence during penetration may have to do with displacement of the anterior vaginal wall and bladder neck, or an increase in intra-abdominal pressure (Moran *et al.* 1999). In this case, it is reasonable to anticipate improvement following pelvic floor exercise. Leakage during orgasm is more likely to be associated with involuntary detrusor contractions. Simultaneous bladder contractions and urethral relaxation have been demonstrated in urodynamic studies during orgasm (Khan *et al.* 1988).

Because of embarrassment and discomfort with the intimate nature of the problem, patients may not volunteer information related to sexual function, and in particular, incontinence during sexual activity. It is incumbent upon the evaluating therapist to ask the relevant questions, and provide a safe and open environment in which the patient can feel comfortable discussing sexual concerns. One method of providing an opening for discussion is by explaining the interaction of the pelvic floor with supportive, sphincteric and sexual function.

The exact mechanisms by which pelvic floor muscle (PFM) physiology is involved in sexual function and enhancement have not been clearly elucidated. Early studies maintained that strong PFM's in women were crucial for attainment of orgasm (Chambless *et al.* 1984), and that weak or deconditioned muscles may provide insufficient activity necessary for vaginal friction or blood flow, and inhibit orgasmic potential (Graber & Kline-Graber 1979). According to Shafik (2000), genital responses are provided by contraction of the levator ani, consisting of the pubococcygeous and iliococcygeus muscles. The literature does support the use of pelvic floor exercise to improve sexual function. Bø *et al.* (2000) reported the results of a randomized controlled study in which PFM training was demonstrated to improve quality of life and sexual function in women with SUI. In a Turkish study, improvement in sexual desire, performance during coitus and achievement of orgasm were reported in women ( $n=42$ ) who received PFM rehabilitation (Beji *et al.* 2003).

### **Post-surgical sexual problems**

Another critical aspect of pelvic floor function and rehabilitation with regard to sexual health relates to surgical conditions. There are few randomized controlled studies comparing different surgical techniques with evaluation of sexual function (Achtari & Dwyer 2005). A decrease in sexual function has been correlated with surgery for SUI (de Leval 2003), tension-free vaginal tape (Yeni *et al.* 2003) and prolapse repair (Holley *et al.* 1996; Paraiso *et al.* 1996; Nieminen *et al.* 2003). Sexual dysfunction associated with surgical procedures includes altered orgasmic response, postoperative loss of libido and postoperative dyspareunia. Achtari & Dwyer (2005) proposed that operative damage to the dorsal nerve of the clitoris may explain orgasmic function impairment. Postoperative dyspareunia is most probably caused by vaginal shortening and narrowing following excessive vaginal excision (Goldberg *et al.* 2001). Pain, restricted mobility and decreased sensation are common side-effects of surgery. As in orthopaedic surgery, for example, physiotherapists possess the modalities and skills required to facilitate enhanced circulation, improve soft-tissue mobility, and increase muscle strength and stability to improve the overall surgical outcome. This is certainly the case after surgery for SUI and prolapse. In light of the findings of possible decreased sexual function as a result of these procedures, viewing enhanced sexual activity as a goal of postoperative treatment provides an additional arena in physiotherapy practice.

### **Physiotherapy treatment for sexual dysfunction**

#### *Sexual pain disorders*

The role of the physiotherapist in the multidisciplinary treatment of sexual pain disorders has been addressed in the literature (Bergeron *et al.* 1997; Holland 2003; Rosenbaum 2005). Reissing *et al.* (2005) recently published findings demonstrating that 90% of women reporting pain as a result of vulvar vestibulitis syndrome (VVS) demonstrated pelvic floor pathology.

Of significance to the physiotherapy profession is their finding that physiotherapists blind to the diagnostic status of participants reached almost perfect agreement in the diagnosis of pelvic floor pathology. However, there is admittedly a paucity of literature describing, as well as validating empirically, the role of physiotherapy. There is also confusion between the terms 'biofeedback' and 'physiotherapy'.

The physiotherapy approach to treatment of women with complaints of inability to have intercourse, or painful intercourse, includes taking a detailed history, performing a physical examination, and providing a treatment plan consistent with the goals of the patient. Treatment tools utilized by the physiotherapist include: education, i.e. providing anatomical and physiological information; cognitive behavioural therapy, particularly with vaginal dilators; rehabilitative approaches, such as PFM strengthening and relaxation with tools such as biofeedback; and palliative treatment methods to decrease pain and improve tissue mobility. Manual techniques including massage, stretching, and soft-tissue and bony mobilizations are important components of treatment. The physiotherapy intervention generally consists of evaluation and treatment with education and cognitive behavioural therapy, exercises, manual therapy techniques, and modalities including pelvic floor biofeedback and electrical stimulation (Rosenbaum 2005).

Pelvic floor surface electromyography biofeedback is one of the many tools available and commonly used by physiotherapists in the treatment of vulvar pain syndromes, and this also has a role in the assessment and treatment of vaginismus (van der Velde *et al.* 2001; Reissing *et al.* 2005). Of all the physiotherapy interventions mentioned, only biofeedback has undergone controlled studies to date. Glazer *et al.* (1998) were the first to demonstrate the findings of increased pelvic floor hypertonus and decreased PFM stability in vulvar pain syndromes, and they demonstrated at least 50% effectiveness in reducing VVS pain with pelvic floor biofeedback (Glazer *et al.* 1995). Subsequent studies (Bergeron *et al.* 2001; McKay *et al.* 2001) produced similar findings. A recent Korean study (Seo *et al.* 2005), which combined electrical stimulation with biofeedback on 12 patients with vaginismus, reported that all patients achieved successful sexual intercourse during and after the treatment.

To date, randomized controlled studies demonstrating the effectiveness of physiotherapy in treating sexual pain disorders have not been published in the literature. Retrospective studies have reported a success rate of 77% improvement (Hartmann 2001; Bergeron *et al.* 2002). However, conceptual articles on physiotherapy treatment of vulvar and pelvic pain syndromes have been published. The conceptual formula presented by Bergeron & Lord (2003) describes

the role of the physiotherapist, although the tendency to designate only the physiological and musculoskeletal aspects of treatment to the physiotherapist is noted. The above authors stated that the main goals of physiotherapy are to: (1) increase awareness and proprioception of the musculature; (2) improve muscle discrimination and muscle relaxation; (3) normalize muscle tone; (4) increase elasticity at the vaginal opening and desensitize painful areas; and (5) decrease fear of vaginal penetration. Rosenbaum (2005) expanded on the physiotherapist's role in providing cognitive behavioural therapy, helping to relieve anxiety regarding penetration and in identifying psychological components to be further addressed with a qualified mental health professional. Fitzgerald & Kotarinos (2003) comprehensively described physiotherapy assessment and treatment techniques in the management of conditions of hypertonus of the pelvic floor resulting in dyspareunia, including pelvic and vulvar pain syndromes, and interstitial cystitis.

Modalities other than biofeedback reported in the literature have included a case report on the use of ultrasound in the treatment of dyspareunia (Hay-Smith 2000). Electrical stimulation has also been studied and found to be effective in the treatment of pelvic pain (Fitzwater *et al.* 2003) and in the treatment of sexual pain disorders (Nappi *et al.* 2003).

#### *Other female sexual dysfunctions*

While Bø *et al.* (2000) reported their findings that pelvic floor exercises improved sexual function, there have been few, if any, published studies regarding the use and effectiveness of physiotherapy and treatment modalities unique to physiotherapy in the assessment and treatment of sexual dysfunctions other than pain disorders. These disorders are referred to as decreased sexual interest or desire, decreased subjective arousal, decreased genital arousal, and anorgasmia (Basson *et al.* 2004). Wurn *et al.* (2004) reported that, in the course of treating female infertility with a manual physiotherapy technique, patients reported decreases in dyspareunia, as well as improvement in all areas of sexual function, including improved arousal and orgasm. This is an important first step in demonstrating the role of manual therapy in effecting a change in sexual response, and clearly, further studies are indicated.

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### Male sexual health

Discussion of the treatment of male pelvic pain on an international pelvic floor physiotherapist automatic mailing list server, LISTSERV ([www.ioptwh.org](http://www.ioptwh.org)), reveals that physiotherapists are actively treating pelvic floor problems in men. However, it is unclear whether and to what extent physiotherapists are involved in the treatment of male sexual dysfunction. Nonetheless, use of pelvic floor exercise and biofeedback for the treatment of erectile dysfunction (ED) and premature ejaculation (PE) has been reported in the literature.

### Erectile dysfunction

A randomized comparison of physiotherapist-administered pelvic floor exercise versus surgery for the treatment of 150 patients with ED caused by venous leakage found that surgery was not superior to exercise, and that 42% of subjects were sufficiently satisfied with the outcome to refuse surgery (Claes & Baert 1993). In a Belgian study of 51 men with ED secondary to venous occlusion, 47% regained a normal erection after treatment with pelvic floor exercise, biofeedback and electrical stimulation (Van Kampen *et al.* 2003). In another study, 55 men with ED were randomized to an intervention group consisting of exercise and biofeedback or a control group where patients received advice on 'lifestyle changes'. At 3 months, compared with controls, men in the intervention group showed significant mean increases in the various erectile function domains (Dorey *et al.* 2004).

### Premature ejaculation

The use of pelvic floor exercise has also been reported in the treatment of PE. La Pera & Nicastro (1996) published findings showing that 61% of patients with PE were cured and able to control the ejaculatory reflex after 15–20 sessions of pelvic floor exercise.

### Conclusion

Physiotherapists skilled in urogynaecological rehabilitation possess skill and knowledge in an area that is relevant to both the medical and mental health communities. Pelvic floor rehabilitation is a unique niche within the interdisciplinary team involved in treating sexual dysfunction. Pelvic floor physiotherapists utilize a range of treatment tools, including manual therapy, therapeutic exercise, biofeedback, electrical stimulation and heat/cold modalities. The

present literature review on the efficacy of such techniques on the treatment of sexual dysfunction in both men and women reveals that physiotherapists are integral members of the healthcare team involved in the improvement of sexual health. More randomized controlled studies are necessary to validate the success of physiotherapy intervention.

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