ORIGINAL RESEARCH

Therapist-Aided Exposure for Women with Lifelong Vaginismus: Mediators of Treatment Outcome: A Randomized Waiting List Control Trial

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ABSTRACT

Introduction. Therapist-aided exposure seems an effective treatment for lifelong vaginismus, but mechanisms of action have not yet been established.

Aim. The purpose of the present study was to investigate whether treatment outcome of a therapist-aided exposure treatment was mediated by changes in positive and negative penetration beliefs or feelings of sexual disgust.

Methods. Participants with lifelong vaginismus were allocated at random to a 3-month exposure (n = 35) or a waiting list control condition (n = 35).

Main Outcome Measure. Full intercourse was assessed daily during 12 weeks. Secondary outcome measures (complaints about vaginismus and coital pain) were assessed at baseline and after 12 weeks. Possible mediators: penetration beliefs (catastrophic pain beliefs, genital incompatibility beliefs, perceived control beliefs) and feelings of sexual disgust were assessed at baseline and 6 weeks.

Results. Treatment outcome (coital frequency, symptoms of vaginismus, and coital pain) at 12 weeks was mediated by changes in negative and positive penetration beliefs at 6 weeks, in particular by more pronounced reduction of catastrophic pain penetration beliefs. No evidence was found that changes in feelings of sexual disgust mediated treatment outcome.

Conclusion. The results strongly suggest that therapist-aided exposure affects negative penetration beliefs and that these changes in negative penetration beliefs mediate treatment outcome in women with lifelong vaginismus. Implications for treatment are discussed. N = 4850 words. **Ter Kuile MM, Melles RJ, Tuijnman-Raasveld CC, de Groot HE, and van Lankveld JJDM. Therapist-aided exposure for women with lifelong vaginismus: Mediators of treatment outcome: A randomized waiting list control trial. J Sex Med 2015;12:1807–1819.**

Key Words. Lifelong Vaginismus; Sexual Pain Disorder; Sexual Dysfunction; CBT; Treatment; Exposure; Women; Mediation

Introduction

Vaginismus is defined in DSM IV-TR as an involuntary contraction of the musculature of the outer third of the vagina interfering with intercourse, causing distress and interpersonal difficulty [1]. Together with dyspareunia, vaginismus has been merged into the new DSM-5 diagnosis called "Genito-pelvic pain/penetration disorder" [2]. The present study focused on women with lifelong vaginismus, who have never experienced complete vaginal intercourse.

Epidemiological studies often subsume vaginismus in more generalized questions about pain with intercourse resulting in few accurate prevalence estimates [3]. The best estimate of reported rates varies between 0.4% and 6.0% [4–7]. In more sexually conservative cultures, there appears to be a significantly higher rate of vaginismus [8–11]. Vaginismus has been reported as the most important reason for seeking help for sexual problems in Turkey. In Western and Southern Europe, 14–25% of women who attend sexual dysfunction clinics for sexual problems describe vaginismus as their primary concern [12,13].

The etiological determinants of lifelong vaginismus have as yet not been definitively identified [14]. Conservative and religious attitudes, lack of sex education, sexual abuse, and relationship factors have all been reported as potential causal risk variables; however, none have been confirmed empirically [14]. Vaginismus is classified as a sexual dysfunction; however, little research information is available on the sexual function and response of women with lifelong vaginismus. While some women and their partners report few sexual problems if vaginal penetration is not anticipated or attempted, others find their sexual functioning significantly compromised [14].

Based on the fear avoidance model of Vlaeyen and Linton [15], a circular fear avoidance model for vaginismus has been proposed [16,17]. The basic tenet of the model is that catastrophic thinking about vaginal penetration will give rise to vaginal penetration-related fears. Increased fear facilitates increased pelvic muscle tone, resulting in pain or failed attempts. Some components of this model received empirical support. For example, cross-sectional studies found that women with lifelong vaginismus show a specific pelvic muscle defense reflex in response to potential vaginal penetration [18], display significantly more defensive reactions, and report more anxiety compared with women without vaginismus during pelvic examination [19]. Moreover, they reported higher levels of negative penetration beliefs [20–23] and coital fear [24,25].

Vaginismus, as conceptualized in this model, may be akin to a specific phobia. Exposure to the feared stimulus is essential in overcoming a phobic disorder, and the disconfirmation of dysfunctional cognitions about the feared object, which is enabled by being exposed to it, is considered germane for the resolution of the phobic fear. To test this hypothesis, a therapist-aided exposure treatment was developed [26]. In a recent randomized controlled trial (RCT) that included 70 women with lifelong vaginismus, therapist-aided exposure was found successful in enabling women to experience full intercourse in 89% of treated couples, compared with 12% in untreated couples [24]. Based on the fear avoidance model, we aim here to investigate whether treatment outcome of a therapist-aided exposure therapy for lifelong vaginismus is mediated by a reduction in negative penetration beliefs.

In addition to negative penetration beliefs, there are some indications that more positive appraisals such as perceived control beliefs are also important in the treatment of women with sexual pain problems. Women with dyspareunia who reported increased perceived pain control following cognitive behavioral therapy (CBT) also reported less coital pain [27]. This finding suggests that positive penetration beliefs may also constitute important psychological mechanisms of change in the treatment of women with vaginismus.

Furthermore, it has been suggested [28] that sexual disgust may also play an important role in the causation and maintenance of vaginismus. Disgust is a defensive mechanism serving to protect the body from contamination with pathogens. Sexual disgust may also trigger defensive responses to anticipation of penetration (e.g., defensive contraction of pelvic floor muscles) [28]. In support of this assumption, levator-nasi muscle activity, as a unique physiological expression of disgust, was found specifically enhanced in women with vaginismus, when they were exposed to a women-friendly sex video clip [29].

In sum, although there is evidence that therapist-aided exposure is an effective in the treatment of lifelong vaginismus, no effort has been devoted to empirically testing whether changes in negative or positive penetrations beliefs and feelings of sexual disgust, which are assumed to mediate treatment effectiveness, actually constitute mechanisms of change. We investigated (i) whether in comparison with a waiting list control condition (WLC), exposure affected penetration beliefs and feelings of sexual disgust at 6 weeks, (ii) whether changes in penetration beliefs or feelings of sexual disgust at 6 weeks were related to changes in outcome at 12 weeks, and (iii) whether treatment outcome at 12 weeks was mediated by these changes in the mediation measures.