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The Genito-Pelvic Pain/Penetration Disorder Paradigm and Beyond

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CHAPTER

8

**“Throwing the Baby Out
with the Bathwater”:
The Demise of Vaginismus
in Favor of Genito-Pelvic
Pain/Penetration Disorder**

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COMMENTARY ON THE DSM-5 DIAGNOSIS GENITO-PELVIC PAIN/PENETRATION DISORDER

Over the past 15 years, there has been ongoing debate about whether vaginismus can be differentiated from dyspareunia categorically, dimensionally, or not at all (Reissing, Binik, & Khalife, 1999). Despite the fact that the debate on diagnostic distinction continues, a significant change was made in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013). The diagnosis of Genito-Pelvic Pain/Penetration Disorder (GPPPD) was introduced to replace the hitherto separate diagnoses of Dyspareunia and Vaginismus, previously under the subcategory of sexual pain disorders (DSM-IV-TR; American Psychiatric Association, 2000).

Binik (2005a) argued that the sexual pain disorders were the only pain conditions that were classified according to the activity they interfered with and argued for their removal from the classification of sexual dysfunctions. This was received with broad skepticism from clinicians and researchers alike (Binik, 2005b). The introduction of GPPPD may represent an apparent compromise. The diagnostic criteria for this new category have focused on symptomatology related to pain during sexual activity and/or pain with (anticipated) vaginal penetration. The multidimensional diagnosis of GPPPD is clearly more in line with the outcomes of scientific research and clinical practice than the original categorical classification in DSM-IV-TR as outlined elegantly by Binik's (2010a, 2010b) summary of the literature. However, GPPPD fails to capture the complexity of sexual difficulties in women who have never been able to experience intercourse (for the purpose of this commentary referred to by the previous diagnostic label of lifelong vaginismus). In our opinion, we run the risk that the baby (lifelong vaginismus) is thrown out with the bathwater (sexual pain disorders). By summarizing different aspects of lifelong vaginismus based on the results of recent studies, we will underscore this and offer a temporary solution to assist clinicians and researchers to mediate the omission of lifelong vaginismus from the DSM-5.

Vaginismus was first mentioned as a sexual/reproductive problem by the Italian physician Trotula of Salerno in the eleventh century: "On the tightening of the vulva so that even a woman who has been seduced may appear a virgin" (1940; p. 37). The diagnostic term "vaginismus" was coined by the English gynecologist, J. Marion Sims, in 1861. Even in the first description of vaginismus, the confusion between pelvic floor tension and hypersensitivity/pain is remarkable: "...by the term Vaginismus I propose to designate an involuntary spasmodic closure of the vagina... (Sims, 1861, p. 362). The slightest touch with a feather or with a camel-hair pencil at the reduplication of the

hymeneal band produced as severe suffering as if she were cut with a knife" (p. 361). Vaginismus was first introduced to the DSM classification of sexual dysfunction in 1980 with its sole diagnostic criterion of vaginal spasm interfering with sexual intercourse (American Psychiatric Association, 1980). Despite lack of empirical validation of the diagnostic criterion and associated factors, few changes followed since its first inclusion in the DSM (Reissing, Binik, Khalife', Cohen, & Amsel, 2004). Starting in the mid-1990s, research focusing on dyspareunia flourished with the attention on vulvodynia as a main cause for (superficial) dyspareunia in pre-menopausal women (e.g., Meana & Binik, 1994; Weijmar Schultz et al., 2005). Increasingly researchers struggled to categorically define dyspareunia and vaginismus and research findings pointed towards significant overlap of the two disorders (e.g., Binik, Bergeron, & Khalife', 2007; Borg et al., 2014; de Kruiff et al., 2000; Engman et al., 2004; Har-Toov, Militscher, Lessing, Abramov, & Chen, 2001; ter Kuile et al., 2005). However, despite this overlap, evidence has emerged over the past few years to suggest that there are potential differences in etiology, clinical presentation, and treatment. The process of determining the diagnostic distinction is complex because of difficulties in determining whether symptomatology overlapped due to actual dimensional differences, poor differentiation of study groups, lack of valid and distinct diagnostic criteria, or some combination thereof. Nevertheless, the accumulated evidence of overlapping symptomatology and paucity of information on categorical differences at the time of the development of the DSM-5 criteria resulted in the inferred inclusion of lifelong vaginismus under the collective diagnosis of GPPPD (Binik, 2010b).

For researchers and clinicians who work with women with the complaint of impossible intercourse despite desire and attempts to have intercourse, it should be clear that the diagnosis of lifelong vaginismus can no longer be made on the basis of DSM-5. The current diagnosis focuses on "difficulties...(with) vaginal penetration during intercourse" (American Psychiatric Association, 2013, p. 437) but does not provide for the inability to experience intercourse. In the new DSM-5, women with lifelong vaginismus fall into a diagnostic void. A significant number of these women, especially in countries other than North America and Europe, will indicate reasons other than pain or fear of pain impeding their ability to experience intercourse (e.g., Badran et al., 2006; Dogan, 2009; Michetti et al., 2013; Nabil Mhiri et al., 2013; Yasan & Akdeniz, 2009). In the diagnostic features of GPPPD, it is mentioned that "In other cases, this marked fear does not appear to be closely related to the experience of pain, but nonetheless leads to avoidance of intercourse and vaginal penetration situations" (American Psychiatric Association, 2013, p. 438). However, these diagnostic features are not typically a part of the communication

of diagnoses and not part of diagnostic and inclusion criteria used for clinical practice (e.g., choice of treatment) and research. Consequently, reasons other than pain-related are not adequately captured by the diagnostic dimensions of "vulvo-vaginal or pelvic pain (...)" and "fear and anxiety about vulvo-vaginal or genital pain (...)" (American Psychiatric Association, 2013, p. 437). Finally, the notion of "marked tensing or tightening of the pelvic floor muscles (...)" (p. 437) is hardly an improvement over the vagueness of "... involuntary spasm of the musculature of the outer third of the vagina (...)" of the DSM-IV-TR (American Psychiatric Association, 2000, p. 556). Women report low proprioception of their pelvic floor muscle function and reports of gynaecologists' evaluation are not reliable (Reissing et al., 2004). Pelvic floor physical therapists are well-trained to perform such evaluations; however, they are not typically charged with the diagnosis of women with GPPPD. In addition, for many women with lifelong vaginismus, such an examination would provoke too much anxiety to be carried out. While arguably an improvement in capturing the scientific and clinical portrait of women who experience pain with sexual activity, GPPPD is clinically not useful for women who have never been able to experience intercourse. Even more considerable is the deleterious impact on research. Not being able to differentiate women, at least descriptively (as in Female Orgasmic Disorder: "never experienced orgasm under any situation"; American Psychiatric Association, 2013, p. 430), prematurely obliterates research efforts to highlight the characteristics of potential dimensional differences and/or to clarify categorical differences.

Currently, the accumulated body of research with women unable to experience intercourse is still relatively modest. There are some indications, however, that women with lifelong vaginismus can be distinguished from women with dyspareunia by the degree of catastrophic or fearful penetration cognitions (Borg, Peters, Weijmar Schultz, & de Jong, 2012; Cherner & Reissing, 2013b; Klaassen & ter Kuile, 2009; Reissing, 2012), marked avoidance behavior (de Kruiff et al., 2000; Reissing et al., 2004), disgust of sexual intercourse (Borg & de Jong, 2010; Borg et al., 2011; de Jong, van Overveld, Weijmar Schultz, Peters, & Bu-walda, 2009; Reissing, 2012), and disgust for stimuli contaminated with sexual byproducts (van Overveld et al., 2013). In addition, better treatment outcome in lifelong vaginismus is associated with a reduction in fear and avoidance behavior (Melles et al., 2014; ter Kuile et al., 2009, 2013), far more so than other treatment approaches (Melnik, Hawton, & McGuire, 2012). Treatment paradigms focusing on pain (e.g., Landry, Bergeron, Dupuis, & Desrochers, 2008; Masheb, Kerns, Lozano, Minkin, & Richman, 2009; Spoelstra, Dijkstra, van Driel, & Weijmar Schultz, 2011) have never been evaluated in women who are unable to experience intercourse. It is, however, noteworthy that in treatment studies using an exposure paradigm successfully, the interventions are based

on countering fear and avoidance behavior (ter Kuile & Reissing, 2014; ter Kuile et al., 2009, 2013). While pain may have been one fear about penetration, it does not appear to be pivotal during or after treatment. Rather, it appears that behavioral avoidance keeps women from confronting and disconfirming their penetration-related fears and maladaptive expectations (pain, disgust, injury, etc.; ter Kuile & Reissing, 2014).

Women with lifelong vaginismus report significantly more negative cognitions related to vaginal penetration (e.g., Klaassen & ter Kuile, 2009; Reissing, 2012; ter Kuile et al., 2009) and have higher pain catastrophizing cognitions when compared to both women without sexual pain and to women with dyspareunia (Borg et al., 2012; Klaassen & ter Kuile, 2009). In experimental conditions, women with vaginismus demonstrated enhanced levels of fear towards sexual penetration stimuli compared to women with dyspareunia (Borg et al., 2010). Consistent with the view that catastrophic appraisal of anticipated vaginal penetration may promote hypervigilance to pain and avoidance behavior, women with vaginismus also scored higher on harm avoidance (Borg et al., 2012). The finding that these women were inclined towards higher levels of harm avoidance is in line with behavioral evidence indicating that women with vaginismus, compared to women with dyspareunia, display significantly stronger defensive reactions during gynecological and pelvic floor examinations despite no significant differences in reports of pain (Reissing et al., 2004). In addition, they displayed notably more avoidant behaviors and were less likely to have had gynecological examinations or use tampons and were less likely to attempt vaginal intercourse (Cherner & Reissing, 2013b; de Kruiff et al., 2000). Thus, both pain catastrophizing cognitions and trait harm avoidance could jointly contribute to strengthen the link between sexual cues and (anticipation of) pain (or a negative experience) by eliciting further negative processes and reactions as summarized in the fear avoidance model of vaginismus (Reissing, 2009; ter Kuile, Both, & van Lankveld, 2010; ter Kuile & Reissing, 2014).

In addition to fear of pain, pain catastrophizing cognitions, and harm avoidance, disgust and fear of contamination in women with lifelong vaginismus have offered insights into potential differences between dyspareunia and vaginismus (Borg et al., 2010; Cherner & Reissing, 2013a; de Jong et al., 2009, 2013; Reissing, 2012). Various body parts and body products that are directly involved in sex differ in their contamination sensitivity and disgust potency (Rozin, Nemerhoff, Horowitz, Gordon, & Voet, 1995). In addition, disgust is highly associated with avoidant tendencies and defensive reflexes that may help to protect and to avoid (the anticipated) contamination (Yartz & Hawk, 2002). In this reasoning, the prospect of mere physical contact with the vulva and/or the anticipation of penetration by the partner's penis may elicit flinching or protective muscle contractions

given the high risk of contamination associated with penetration (de Jong et al., 2009; Rozin et al., 1995; van der Velde & Everaerd, 2001).

As a consequence, it seemed reasonable to assume that the more automatically activated associations in memory that lead to the more spontaneous type of behavior (e.g., flinching and defensive reactions) are most relevant in vaginismus. Although for women with vaginismus sexual penetration stimuli indeed automatically elicited associations with disgust (in a single-target implicit association task), similar automatic sex-disgust associations were also evident in women with dyspareunia (Borg et al., 2010). Yet, underscoring the potential importance of reflexive disgust response in vaginismus, women with vaginismus responded with increased levator activity in response to erotic stimulation (Borg et al., 2010). Conceivably, the increased facial levator activity could indicate that women with vaginismus respond with a more intense, general muscular (disgust-induced) defensive response (Shafik & El Sibai, 2002). Consistent with this, previous research has demonstrated that women with vaginismus (but not dyspareunia) score high on disgust propensity (de Jong et al., 2009) and self-report significantly more causal attributions for their vaginal penetration difficulties as related to disgust (Reissing, 2012). It appears that in women with vaginismus, in contrast to those with dyspareunia, the validation process does not give rise to a correction of the initial (penetration-disgust) association (Borg et al., 2010, 2014).

Recent research on pelvic floor muscle activity might shed light on the physiological processes underlying the penetration-disgust or potential penetration-anxiety association and why some women are able to experience intercourse despite anticipation and experience of pain while others are not. Ironically, this research is also suggesting a return to a variation of the much maligned vaginal spasm criterion for lifelong vaginismus (Spoelstra, Weijmar Schultz, Reissing, Borg & Broens, 2014). The vagina is equipped with genito-pelvic reflexes and during sexual arousal and/or intercourse, several of these reflexes can be triggered. In addition, the pelvic floor musculature, along with other muscle groups, is indirectly innervated by the limbic system and may be highly reactive to emotional states (Blok, Sturms, & Holstege, 1997; Spoelstra et al., 2014; van der Velde, Laan, & Everaerd, 2001). Therefore, it seems reasonable to assume that pelvic floor muscles (puborectalis and bulbocavernosus muscles) are highly reactive to emotional stimuli and emotional states, such as anxiety, fear, and disgust. In fact, Both, van Lunsen, Weijenberg, and Laan (2012), using the "combi-probe" (evaluating vaginal pulse amplitude and pelvic floor activity concurrently), reported increased pelvic floor activity in response to fear stimuli in women. Another study was carried out to determine the presence of vaginal sphincter mechanisms through the assessment of intra-vaginal

pressures during voluntary and induced reflexive pelvic floor contractions by filling an intra-vaginal balloon gradually (Broens, Spoelstra, & Weijmar Schultz, 2014). Intra-vaginal pressures and contractions were measured at superficial and deeper levels of the vaginal canal using high resolution, solid state circumferential catheters. Even a very low pressure in the vaginal balloon provoked autonomic reflex contractions of two areas in the vagina, by far exceeding the pressure and duration of voluntary contractions. Summarizing the recent work on vaginal muscle activity, some have hypothesized that autonomic genito-pelvic reflexes occur in reaction to emotional stimuli (e.g., disgust, anxiety, fear) and specific states (e.g., sexual arousal) in women with GPPPD (Spoelstra et al., 2014). Specifically in lifelong vaginismus, autonomic, non-voluntary (paradoxal) reflex contractions of the bulbocavernosus muscle may occur. Clearly, these investigations are in their early phase, but are innovative and promising. Further, this line of research highlights the risks of ignoring potentially critical differences between women who are unable to experience intercourse versus women who experience pain during sexual activity.

In summary, the GPPPD is an empirically based and clinically useful improvement for the diagnosis of pain experienced with sexual activity (in women). However, we believe that the baby is thrown out with the bathwater and GPPPD taxa fall short of demonstrating clinical utility in women who have never been able to experience intercourse. Further, GPPPD does not accurately capture the symptomatology of lifelong vaginismus and suffers of an occidental bias which is noteworthy as greater prevalence rates of vaginismus are observed in non-Western countries (e.g., Michetti et al., 2013). Perhaps most disconcerting is the obstructive effect of the umbrella diagnosis of GPPPD on research. Eliminating even the possibility to denote that vaginal penetration was never possible as a "specifier" associated with the DSM-5 diagnosis (as in Female Orgasmic Disorder) severely curtails the ability of researchers to use formal diagnostic criteria to describe their study groups.

In conclusion, we would like to propose two ways by which the omission of lifelong vaginismus in the DSM-5 can be mitigated. First, we suggest the addition of an ad hoc specifier to the GPPPD, indicating that "vaginal intercourse has never been possible." This allows researchers and clinicians to use the umbrella diagnosis of GPPPD and its diagnostic criteria as they may apply, while being able to identify the subgroup of women suffering lifelong vaginismus. Second, while the diagnostic features outline that avoidance of vaginal penetration can be the result of fear that is not closely related to the experience of pain and has a phobic quality, avoidance is not per se part of the

diagnostic criteria. More research is necessary to understand the nature and causes of the substantive avoidance noted in the majority of women with lifelong vaginismus. In the meantime, we suggest that researchers and clinicians alike pay close attention to whether marked avoidance behavior related to vaginal penetration is present and report this in their diagnostic decision and/or inclusion criteria. With these provisional steps we expect that women who have never been able to experience intercourse and/or show significant avoidance can receive a diagnosis that will guide decisions on appropriate treatment interventions and that research investigating lifelong vaginismus will not be hindered but rather, flourish.

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PART

Conclusion

VI

