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ORIGINAL ARTICLE

Vaginismus and its correlates in an Iranian clinical sample

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Although vaginismus is a relatively common female sexual dysfunction in Iran, there are scant studies reporting on its clinical and social features. The aim of the present study was to compare the social and clinical characteristics of women with vaginismus with those of healthy women. The study comprises 22 patients with vaginismus and 22 healthy controls who presented to the health clinics of Tehran University of Medical Sciences, Iran. We used three assessment tools: interview, a (34-item) questionnaire for demographic and clinical characteristics of vaginismus and a 13-item questionnaire of Female Sexual Distress Scale-Revised (FSDS-R) for sexual distress. The majority (73%) of women with vaginismus had primary vaginismus (unconsummated marriage). These women demonstrated significant higher phobia than healthy women, including fear of genital pain and penetration, fear of bleeding during intercourse, height phobia, aversion to looking or touching the genitalia, fear of vaginal disproportion and also disgust of semen. Compared with the healthy women, these women displayed a significantly higher sexual distress score, defecation or urination problems, general anxiety, higher education levels and lower self-esteem. Our findings suggest that there is a strong correlation between vaginismus, phobia and anxiety.

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INTRODUCTION

The second International Consensus Committee has suggested that vaginismus is persistent or recurrent difficulties with vaginal entry of a penis, a finger and/or any object, despite a woman's desire to do so. Vaginismus is characterized by phobic avoidance, involuntary pelvic muscle contraction and the anticipation, fear and experience of pain in the absence of any structural or other physical abnormalities.[1] Vaginismus has significant effects on sexual and marital satisfaction. Blunted sexual desire, difficulties with arousal and vaginal lubrication and anorgasmia are typical sexual side effects that arise with the expectation of painful sexual activity. On the other hand, pain not only prevented these women from engaging in vaginal penile intercourse, a behavior that implicitly defines normative heterosexuality and a woman's relationship to intimate partners, but it also produced in them feelings of inadequacy and the sense that they were not 'real' women.[2] In societies in which premarital relationships are taboo, vaginismus has extraordinary effects on couples and often poses a serious threat to the maintenance of the marriage.[3–6] The prevalence of vaginismus in Western contexts varies from 5 to 17% among those who sought treatment for sexual dysfunctions. This prevalence is much lower than the 43–73% found in Turkey.[7–9] Studies of vaginismus are scarce among Iranian women. Two studies in women with sexual dysfunction, with a relatively small sample size ($n = 300$ and $n = 295$), have shown the prevalence of 8–30% among Iranian women.[10] Although reports show that vaginismus is a prevalent condition throughout the world, the causes of this disorder may be different in various contexts. A vast number of studies have emphasized the physical roots of vaginismus, a few studies have pointed out the sociocultural reasons for this condition,[9,11–13] and other studies focus on the fear-avoidance model.[3,14,15] There is considerable variation in the correlates and extent of the vaginismus features from one society to another. In some contexts, vaginismus reactions relate to one's cultural influences and sociodemographic traits. For most people in Iran, the first sexual relationship is consummated after marriage, most often on the wedding night. Vaginal intercourse has been identified as the main indicator of successful sexual interaction between husband and wife. Lack of premarital experiences and information about sexuality poses considerable stress and anxiety on newlywed couples.[16] In this context, like many other Islamic countries, sources of anxiety for men and women are different. The main source of fear is the perception of virginity and misconception about pain and bleeding and breaking the hymen for a female virgin, and the responsibility of breaking the hymen and performing intercourse for the male.[3] There are still some societies in which the bloodstained handkerchief (proof of the bride's virginity on the wedding night) has been considered as a stressor. Zargooshi highlights the handkerchief as the stressor cause of unconsummated marriage in 57% of cases in his sample from the Kermanshah province of Iran. The aim of the present study was to explore the clinical and sociodemographic features of patients with vaginismus who reside in Tehran, capital of Iran, and to compare them with healthy women.

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SUBJECTS AND METHODS

Participants

This study was approved by the ethical committee of the Isfahan University of Medical Sciences and with the agreement of the Tehran University of Medical Sciences, Iran. Samples were gathered through local announcements and professional referrals during the period from June 2012 to February 2013 from five health centers of Tehran University of Medical Sciences located in central, western and southern parts of Tehran with a very heterogenic population. A total of 22 women with vaginismus and

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22 women experiencing no sexual difficulties who met our inclusion criteria were recruited for the present research. The study was explained in detail to potential women with the participants providing their informed written consent. The study's inclusion criteria in the vaginismus group were as follows: (1) inability to experience vaginal intercourse for a period of at least 6 months after marriage, despite the desire and frequent attempts to do so (primary vaginismus or unconsummated marriage); (2) inability at the inception of study to experience vaginal intercourse and the avoidance of it for at least the preceding 6 months, despite previously successful experiences of intercourse (secondary vaginismus). The inclusion criteria for the control group were as follows: (1) no history of sexual dysfunction or pain during intercourse. Exclusion criteria for both groups included severe physical or psychological disorder or serious interpersonal conflict that may influence and interfere with normal sexual function.

Measures

The assessment included a detailed interview focusing on the participant's medical and sexual history. We prepared a 47-item questionnaire, of which 3 were demographic questions (marriage age, couple's age difference and education), 13 questions related to sexual distress from Female Sexual Distress Scale-Revised (FSDS-R)[17] and 31 questions pertained to possible causes or relevant factors. We assessed the following items with Likert answers and for other variables, we used dichotomous answers: husband's characteristics, male sexual problems, self-esteem, body image, the couple's emotional relationship, the wife's love for and sexual attraction towards her husband, the relationship between the patient's parents, the emotional relationship between patient and mother and patient and father, knowledge of female sexuality at the time of marriage, the frequency of sexual activity and female sexual and marital satisfaction. Questionnaires were completed by patients at the clinics. The existence of vulvar vestibulitis syndrome was tested by means of a swab test. A psychiatrist initially assessed many patients, whereas others were asked about any symptoms of psychological disorders and, upon such suspicions, psychiatric referrals were made to ensure the absence of serious psychological maladies.

Analysis

Statistical methods used included Student's *t*-test and χ^2 test. All tests for statistical significance were two tailed and performed assuming a type 1 error probability of <0.05.

RESULTS

Among 22 women with vaginismus, the following clinical and social results were observed (Table 1): the mean age of marriage and age difference between male and female was 26.3 (range = 18–43) and 3 years (range = −3–7), respectively. The mean years of education was 14.3 (range = 8–18; s.d. = 2.9) for women and 14.5 (range 8–22; s.d. = 3.85) for their husbands. Of women with vaginismus, 68% ($N=15$) had obtained a bachelor's degree, and 18% ($N=4$) had obtained a master's or PhD degree. A total of 16 women (73%) had primary vaginismus and 6 women (27%) had secondary vaginismus. The mean duration of the problem in primary vaginismus was 33.6 months (range 6–67 months; s.d. = 21.7), and in secondary vaginismus it was 16.4 months (range 6–48 months; s.d. = 16.1). One participant (4.5%) with secondary vaginismus had one child. Although these women had no penetrative sexual encounters for at least the previous 6 months, 41% had engaged in other sexual behavior 3–4 times per week and the same percentage had engaged in such activities 1–2 times per week. The mean number of times that they were seen by a specialist before being referred to us was 6.1 sessions (range 1–14; s.d. = 3.9). One case (4.5%) had a history of surgery for vaginal septum. Two women (9.0%) had a history of surgery on the hymen, and one case (4.5%) had a history of butilium toxin injection and surgery on the hymen. The rates of general anxiety and depression were 50% and 23%, respectively. We observed many phobias including pain phobia in 87% ($N=19$), fear of bleeding in 55% ($N=12$), the belief in the disproportionately 'small' size of the vagina as compared with the 'large' penis in 78% ($N=17$) and aversion to looking at or touching the genitalia in 60% ($N=13$) of women in the vaginismus group. Table 2 compares the results of sexual distress score, anxiety and different phobias in healthy women with the vaginismus group. Patients in the vaginismus group reported higher rates of a range of phobias including: fear of genital pain and penetration ($P<0.001$), bleeding phobia ($P<0.001$), height phobia ($P<0.01$), fear of looking or touching the genitalia ($P<0.01$), fear of the existence of a problem or disproportion in the vagina ($P<0.001$) and semen disgust ($P<0.01$). Compared with the healthy control group, women in the vaginismus group demonstrated lower self-esteem ($P<0.05$) and less sexual knowledge at the time of marriage ($P<0.05$), higher sexual distress score ($P<0.001$) (Table 2), defecation or urination problems ($P<0.05$), higher educational level ($P<0.05$) and higher general anxiety ($P<0.05$).

DISCUSSION

The present study details the clinical and social characteristics of vaginismus among Iranian women and compares these characteristics with those of healthy women who were referred to the same health centers but with other complaints. Similar to other reports,[11,15,18,19] we found significant variance in the levels of phobia and anxiety between the two groups.

Higher phobia in women with vaginismus was a noteworthy finding. Intact hymen subject to laceration was found to be the primary basis for the fear of pain. Fear of pain was evident not only during attempted penetration, but also from a gynecologic examination, an injection and in many cases from any routine procedure that involved minor discomfort or pain. Having shown that 73% of patients suffered from primary vaginismus (even finger penetration) and reported a phobia of pain before the first attempt, the problem is clearly centered more on a subjective perception or anticipation of pain than actual physical pain. In many cases, trusted friends or relatives had warned the women about the severe pain they could expect during their first attempt at intercourse. Among the fears exhibited, some were extreme in nature: one woman (4.5%) confessed to a fear of paralysis during intercourse and two women (9.0%) to a fear of death. We did not observe any organic problems that could be a source of pain such as hymeneal abnormality, vaginal atrophy or infections, and vulvar vestibulitis was confirmed in only two women, both with secondary vaginismus. Phobia of bleeding was limited to hymeneal or vaginal bleeding. More than three-quarters of the vaginismus women believed that the size of their vagina is too small and feared that the inserted penis would be disproportionately large for such a 'small' vagina to receive, exacerbating their fears of unbearable pain at the prospect of intercourse. A marked aversion to looking at or touching the genitalia and disgust of semen were among other phobias in our study. These preceding factors have been reported in other contexts too.[19,20] Overall anxiety and phobia were prevalent among other Iranian vaginismus subjects who were recruited from a private psychiatric clinic in Tehran, with 48% and 37% respectively.[21]

Moreover, we found sexual distress was significantly higher among women with vaginismus. According to FSDS-R questionnaire designers,[17] a score of 11 or higher is considered as a sign of sexual distress. Based on such guidelines, 100% of our subjects indicated a high degree of sexual distress. The above-mentioned fears are possible explanations for the high levels of sexual distress in our subjects.

In fact, the highlights of this study are the role of fear of pain, phobia and anxiety in primary vaginismus and unconsummated marriage. These findings represent further support to suggest that vaginismus could be considered a type of specific phobia characterized by clinically significant anxiety or, in some cases, panic provoked by exposure to a specific feared object or situation.[15]

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Table 1. Clinical and social characteristics of patients with vaginismus vs control group

Characteristics	*Vaginismus group* (N = *22)*	*Control group* (N = *22)*	*Difference 95% confidence interval*
	Mean (s.d.)	*Mean (s.d.)*	
Marriage age (years)	26.3 (5.8)	23.3 (4.7)	3.0 (−0.22, 6.22)
Couple's age difference (years)	3.1 (2.7)	4.4 (2.5)	−1.3 (−2.94, 0.22)
Education in women (years)	14.3 (2.9)	12.0 (3.7)	2.3 (0.29, 4.34)*
	No. (%)	*No. (%)*	
Self-confidence			
Good	10 (45.5)	10 (45.5)	0.0 (−29.4, 29.4)
Moderate	5 (22.7)	11 (50)	−27.3 (−54.5, −0.01)*
Weak	7 (31.8)	1 (4.5)	27.3 (95.9, 48.6)*
Body image			
Good	18 (81.8)	17 (77.3)	4.6 (−19.3, 28.3)
Moderate	2 (9.1)	4 (18.2)	−9.1 (−29.2, 11.8)
Weak	2 (9.1)	1 (4.5)	4.5 (−10.3, 19.4)
Emotional relationship with husband			
Good	15 (68.2)	18 (81.8)	−13.6 (−38.9, 11.6)
Moderate	3 (13.6)	4 (18.2)	−4.5 (−26.1, 17.0)
Weak	4 (18.2)	0 (0.0)	18.2 (2.1, 34.3)*
Love husband			
High	20 (90.9)	19 (86.4)	4.5 (−14.2, 23.3)
Moderate	1 (4.5)	2 (9.1)	4.5 (−19.4, 10.3)
Low	1 (4.5)	1 (4.5)	0.0 (−12.3, 12.3)
Emotional relationship with mother			
Good	15 (68.2)	18 (81.2	13.6 (−38.9, 11.6)
Moderate	5 (22.7)	4 (18.2)	4.5 (−19.3, 28.3)
Weak	2 (9.1)	0 (0.0)	9.1 (−2.9, 21.1)
Emotional relationship with father			
Good	13 (59.1)	17 (77.3)	−18.2 (−45.2, 8.8)
Moderate	6 (27.3)	3 (13.6)	13.6 (−9.9, 37.1)
Weak	3 (13.6)	2 (9.1)	4.5 (−14.2, 23.3)
Parents emotional relationship			
Good	10 (45.5)	14 (63.6)	−18.2 (−47.1, 10.7)
Moderate	8 (36.4)	8 (36.4)	0.0 (−28.4, 28.4)
Weak	4 (18.2)	0 (0.0)	18.2 (2.1, 34.3)*
Sex knowledge at marriage			
High	0 (0)	4 (18.2)	18.2 (−34.3, −2.1)*
Moderate	1 (4.5)	5 (22.7)	−18.2 (−37.7, 1.4)
Low or nothing	21 (95.5)	13 (59.1)	36.4 (4.1, 58.7)*
Sexual satisfaction			
High	14 (63.6)	20 (90.9)	−27.3 (−50.7, −3.9)*
Moderate	3 (13.6)	1 (4.5)	9.1 (−7.7, 25.9)
Low	5 (22.7)	1 (4.5)	18.2 (−1.4, 37.7)
Marital satisfaction			
High	17 (77.3)	20 (90.9)	13.6 (−34.9, 7.6)
Moderate	5 (22.7)	2 (9.1)	13.6 (−7.6, 34.9)
Low	0 (0.0)	0 (0.0)	–
Sexual activities			
3–4 Weekly	9 (40.9)	10 (45.5)	−4.6 (−33.8, 24.7)
1–2 Weekly	9 (40.9)	10 (45.5)	−4.6 (−33.8, 24.7)
One per month	4 (18.2)	1 (4.5)	13.6 (−4.7, 32.0)
Few in years	– (0.0)	1 (4.5)	−4.5 (−13.2, 4.2)
Husband characteristics			
Kind	12 (54.5)	9 (40.9)	13.6 (−15.6, 42.9)
Anxious	4 (18.2)	1 (4.5)	13.6 (−4.7, 32.0)
Obsessive	6 (27.3)	3 (13.6)	13.6 (−9.9, 37.1)
Idealism	8 (36.4)	6 (27.3)	9.1 (−18.3, 36.5)
Husband sexual dysfunction			
Low desire	1 (4.5)	0 (0.0)	4.5 (−4.2, 13.2)
Erectile dysfunction	2 (9.1)	0 (0.0)	9.1 (−2.9, 21.1)
Premature ejaculation	1 (4.5)	0 (0.0)	9.1 (−2.9, 21.1)
Female consent for marriage	22 (100)	21 (95.5)	9.1 (−2.9, 21.1)
Male consent for marriage	22 (100)	21 (95.5)	9.1 (−2.9, 21.1)
Mother's death (client's age <20 years)	1 (4.5)	0 (0.0)	4.5 (−4.2, 13.2)
Father's death (client's age <20 years)	2 (9.1)	0 (0.0)	9.1 (−2.9, 21.1)

*$P<0.05$.

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Table 2. Sexual distress, anxiety and phobia in patients with vaginismus vs control group

	Vaginismus group (N = 22)	*Control group* (N = 22)	*Difference 95% confidence interval*
	Mean (s.d.)	*Mean (s.d.)*	
Sexual distress score	24.1 (11.2)	2.2 (2.4)	21.8 (16.7, 26.9)***
	No. (%)	*No. (%)*	
Animal phobia	6 (27.3)	2 (9.1)	18.2 (− 4.0, 40.3)
Height phobia	7 (31.8)	0 (0.0)	31.8 (12.4, 51.3) **
Fear of penetration pain	19 (86.4)	0 (0.0)	86.4 (72.0,100.0)***
Fear of bleeding during penetration	12 (54.5)	1 (4.5)	50.0 (27.4, 72.6)***
Fear of disproportionately small vagina	17 (77.3)	0 (0.0)	77.3 (59.8, 94.8)***
Fear of looking or touching genitalia	13 (59.1)	3 (13.6)	45.5 (20.4, 70.5)**
Semen disgust	7 (31.8)	0 (0.0)	31.8 (12.4, 51.3)**
General anxiety	11 (50)	4 (18.2)	31.8 (5.4, 58.2) *
Depression	5 (22.7)	2 (9.1)	13.6 (− 7.6, 34.9)
Obsessive thought	3 (13.6)	3 (13.6)	0.0 (− 20.3, 20.3)
Homosexuality orientation	0 (0.0)	0 (0.0)	–
Fecal–urinary problem	5 (22.7)	0 (0.0)	22.7 (5.2, 40.2)*
Vulva vestibulitis syndrome	2 (9.1)	0 (0.0)	9.1 (− 2.9, 21.1)
Sexual trauma	1 (4.5)	0 (0.0)	4.5 (− 4.2, 13.2)

*$P<0.05$, **$P<0.01$, ***$P<0.001$.

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Mean years of education was significantly higher in women with vaginismus than healthy women. It has been shown that in couples with unconsummated marriage because of vaginismus, other nonpenetrative sexual activities can be very satisfying and the majority of husbands of vaginismic women do not react negatively to nonconsummation.[8,12] It is possible that the existence of vaginismus in well-educated couples results in more adaptation and as a result may lead to a prolonging of the condition in this group. In our sample, the mean year of education was 14.3 years and the mean duration of problem was 33.6 months. Similar to our findings, in the study of Özdemir *et al.*,[12] the mean years of education and duration of problem were 13.3 years and 31.3 months, respectively. In contrast, in the study of Zargooshi[22] on unconsummated marriage in which 67% of couples were from rural regions (the education level of women was not mentioned), the mean duration of the problem was 7 days. We suggest that many cases of vaginismus in couples with low education and socioeconomic status lead to intercourse much sooner because of the persistence and intervention of the husband. As a result, instead of vaginismus we encounter other sexual problems in these women coerced into penetrative sex by unsympathetic husbands. Discomfort during urination or defecation was observed in 23% of women that indicate the trace of pelvic floor muscle problem. Similarly, van de Velde[23] reported that more than half of the women with vaginismus also had urination or defecation problems.

Similar to another study in Iran,[24] we did not find any significant difference in sexual abuse between the vaginismus and healthy women. Just 1 of 22 vaginismus patients reported a history of sexual trauma. One study in Egypt showed that from 191 women with unconsummated marriage, only 6 cases had a history of sexual trauma.[11] However, in other studies, childhood sexual trauma was a prevalent factor.[2,25] In addition, homosexual orientation was not reported by any of the women in our sample. These two items converge greatly from most data originating in Western studies.

We did not observe statistically significant differences between the vaginismus group and healthy women in factors such as the age difference of the couple, loveless and obligatory marriage, woman's early marriage and pressure imposed by relatives on the couple to engage in intercourse on their wedding night. This stands in contrast with the Zargooshi[13] report from Kermanshah, Iran, and also the study of Al-Sughayir[26] in Saudi Arabia that wives with unconsummated marriages had married at an earlier age when compared with the healthy control group. The reasons can clearly be found in the differences between the traditional and modern society.

Our data did not show any significant differences in the prevalence of male sexual dysfunction between the two groups. This is in contrast to the study of Dogan and Dogan[27] that found that 65.5% of the male partners of women with vaginismus had one or more sexual dysfunctions. In another study, male sexual dysfunction was an associated factor in 27.5% of vaginismus cases.[28] In our study, after treatment of vaginismus, the male sexual problem was resolved in three of four cases. It is important in the potential treatment of vaginismus that a determination is made at the outset as to whether a male sexual dysfunction is a primary cause or accompanying factor, as each would require its own tailored treatment.

A number of limitations of this study should be noted. First, the number of participants was too small to arrive at definitive conclusions. Second, in assessing some terms such as 'self-esteem' or 'body image' and 'anxiety', we did not use a specifically tailored questionnaire, although anxiety was clinically confirmed by qualified psychiatrists. Moreover, we could not estimate their 'sexual knowledge at the time of marriage' and our result was based on the women's own recollections. We are sure that sexual knowledge at the time of marriage in the vaginismus women was inadequate, but we are confident that this situation was the same for both groups and with meaningful higher education levels in the vaginismus group, we cannot assume lower sexual knowledge.

Our findings imply that the fear-avoidance model explains the process of creating disease in the majority of our cases. Based on this model, incorrect assumptions that penetration will be painful can catastrophize a woman's sexual encounter, even without any penetration. Fear of pain leads to the contraction of the outer vaginal muscle at any attempt of penetration that in turn can cause pain, fear and result in avoidance behaviors.[3,14,15]

CONCLUSION

Our results show that even within a single country, the etiological causes of vaginismus could vary significantly according to socioeconomic factors; therefore, treatment should be individualized to each woman's circumstances. Our study confirmed the general consensus of other studies that a major contributing factor of vaginismus was fear of pain. The areas of divergence

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between our study and most Western studies were the very low rates of sexual trauma, phobias related to laceration of intact hymen and aversion to looking or touching the genitalia in our participants. Based on our findings, we agree with Reissing[19] who suggests that treatment may be most effective when directly and specifically targeting fear and anxiety associated with vaginal penetration and confronting behavioral avoidance of intercourse.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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