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## A Literature review: Vaginismus status in the Arab World

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### Abstract

**Objective:** In this review, we are reviewing the vaginismus status in the Arab world in general and in Oman specifically.

**Method:** We look at a group of review articles from different countries and compared the results among them in order to draw meaningful conclusions in terms of possible vaginismus causative factors, diagnostic and treatment approaches, challenges and impacts, proposed solutions, and the currently available research gaps.

**Results:** Vaginismus is defined as involuntary muscle contraction with difficulty allowing vaginal penetration despite the willingness of women to do so [2]. There are certain variables like; culture, patient age, the definition of sexual dysfunction or pain, study design, and outcome measures are made reporting vaginismus incidence and prevalence estimates for female sexual dysfunction and pain challenging [5]. There are multiple causes of vaginismus ranging from simple anatomic issues to complex bio psychosocial issues. The most likely and the proposed causative factors have primarily been psychogenic. However, there are very few empirical researches that support the proposed causative factor. Furthermore, there has been a gap in investigating the possible biological causes of vaginismus [4]. Different studies agreed that the treatment of vaginismus should be tailored according to each case, “a one-size fits all” approach will not lead to a successful treatment. A multidisciplinary team including; a well-experienced specialized team of “a gynecologist, physical therapist, and psychologist/sex therapist should be involved in the assessment and treatment of vaginismus cases.” [32].

**Conclusion:** In general, there is a huge research gap related to the vaginismus concept. In Arabian countries, in general, and in Oman, specifically, there has been a lack of research interest in vaginismus and sexual pain disorders. In this review, we are highlighting different vaginismus aspects in order to address its possible significant negative impacts on a woman's health, self-esteem, relationships, quality of life, and work productivity. Therefore, that necessitates a multidisciplinary team approach to tackling it properly.

**Keywords:** Vaginismus, sexual dysfunction, painful penetrative sex, involuntary vaginal contraction, vaginismus diagnosis, vaginismus treatment

### Introduction

It's known that emotional and hormonal status influences female sexual function. Sexual dysfunction has different categories including sexual pain conditions. There is still confusion about whether sexual pain is a sexual disorder, pain disorder, or both. There are different grades of sexual pain; it can be mild to severe, generalized or localized, lifelong or acquired, and idiopathic or secondary [1]. Vaginismus is mainly unknown among clinicians and women, although it's one of the more common female psychosexual problems. Vaginismus is defined as involuntary muscle contraction with difficulty allowing vaginal penetration despite the amenability of women to do so [2]. Differentiating dyspareunia from vaginismus is not that easy clinically due to the imbrication features. In clinical settings, women with vaginismus were set up to display significantly advanced situations of emotional torture while witnessing a gynecological examination [3]. To date, there are no epidemiological studies examining the population frequency of vaginismus [4]. Certain variables like; culture, patient age, description of sexual dysfunction or pain, study design, and outgrowth measures are making reporting vaginismus frequency estimates for female sexual dysfunction and pain challenging [5]. The frequency rates in clinical settings remain unknown [6]. Multiple causes of vaginismus are reported ranging from simple anatomic problems to complex biopsychosocial issues.

The most likely and the proposed causative factors have primarily been psychogenic. Still, there are truly numerous empirical inquiries that support the proposed causative factor. In addition, the possible natural factors which are contributing to the development of vaginismus have not been adequately studied<sup>[4]</sup>. In general, there were numerous empirical studies that have exfoliated little light on implicit vaginismus etiology. In Arabian countries, in general, and in Oman, specifically, there has been a lack of disquisition interest in vaginismus and sexual pain conditions. Vaginismus should be treated from a multidisciplinary point of view because it has a significant negative impact on a woman's health, tone- of regard, connections, quality of life, and work productivity.

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### **Major diagnostic/management challenges listed from western and Asian countries compared with reports from Middle East countries**

There are several biopsychosocial obstacles in regard to diagnostic and management aspects of vaginismus [Table1]. One of these challenging aspects is, that patients' resistance to treatment if they have a history of vaginismus in their relatives or in the presence of a partner who says it is his or her fault<sup>[7]</sup>.

Treatment should be individualized to each woman's circumstances, as shown in some studies, the etiological causes of vaginismus could vary significantly according to socioeconomic factors.

Studies agreed that a major contributing factor to vaginismus was fear of pain. The areas of divergence between studies from the most western part of the world and middle-east were phobias related to laceration of an intact hymen, aversion to looking or touching the genitalia, and the very low rates of sexual trauma in participants from middle-east. As a result, the recommended treatment may be most effective when directly and specifically targeting fear and anxiety associated with vaginal penetration and confronting behavioral avoidance of intercourse<sup>[8]</sup>.

One of the studies in the USA has attempted to establish some clinical characteristics and management of 100 Arab couples with consumable marriage due to the woman's primary vaginismus caused by vaginal painful penetration. The largest group of vaginismus in Muslim Arab societies contributed to consumable marriage due to various cultural factors which play a major role in the occurrence of primary vaginismus including pain associated with sexual penetration. This thought process of the "breaking" of the hymen upon the first attempt of penetration, and an awareness that it will be accompanied by pain, is evident in this population and is thus the main risk factor and contributor to the development of vaginal painful penetration in Saudi women.

Vaginismus diagnosis is challenging because the majority of cases are first encountered by gynecologists who are usually inadequately trained and offer insufficient medical care, and doctor-patient interactions in this context. As a result, gynecologist in the Arab Muslim society, specifically, faces added pressure to treat these sexual disorders, due to the presence of cultural taboos<sup>[14]</sup>. Another challenging factor is the mental health stigma that might prevent referring to

specialized mental and sex therapies. The multidisciplinary approach is ideal and recommended for clinical, diagnostic, and management wise, practice in approaching vaginismus cases<sup>[15]</sup>. To the best of our knowledge, clinics offering this type of team approach are few in the developing world. Visiting the traditional healers is reported at least once before visiting the gynecologist, and that is contributed to the beliefs of supernatural influences (witchcraft, jinn possession, or evil eye). However, the study showed an underestimating result of faith healers, only 6.2% of the consultations were with faith healers.

Misconceptions around vaginismus issue necessitate further investigation, and public education, to avoid adding to the preexisting wealth of misconceptions<sup>[16]</sup>.

There are some studies done by gynecologists in developing countries that reported the successful treatment of vaginal painful penetration with conventional therapy or Botox in cases of intractable conditions, respectively<sup>[16-18]</sup>.

In one study, 48 out of 96 couples who were married for more than 1 year needed less than 1 week of treatment sessions to be cured, (meaning successful penetration of some sort, which was pain-free and without fear) and to consummate their marriages regardless of the duration of marriage ( $p=.106$ ), which could be perhaps because patients attended daily treatment sessions as instructed. In line with reports by other gynecologists, the therapy durations were quite short in this study<sup>[11, 17]</sup>. Contrasted with the Fageeh WM study which required a few months for a cure<sup>[18]</sup>.

The results of this study support the finding of Turkish couples<sup>[19]</sup>, but did not support the findings in Taiwan, which shows couples with a two-year period of consummated intercourse have a better success rate than those with a longer period<sup>[20]</sup>. Perhaps cultural differences between these countries may play a major role in the needed treatment durations.

Involving the husband in the treatment plan together with vaginal penetration training sessions for women, helped in reducing vaginal penetration fears. However, there was no assessment report comparing those cases who used the trainers themselves and those who were helped by their partners. The crude measure of success rate was 96% and 87% complete success, which is in line with reported rates in Taiwan<sup>[20]</sup>, where after therapy 93.3% of vaginismus women were treated successfully and 83.3% ended up having regular joyful intercourse. In addition, there was clinical improvement in terms of, perceived control beliefs regarding penetration and a pronounced reduction in complaints of vaginal painful penetration, coital fear, and catastrophic pain beliefs regarding vaginal penetration, in the 9 women, in this study, who were regarded as having partial success. Support and patience were important factors of treatment as were empathy and encouragement. Other Asian countries, with similar cultural beliefs, showed similar improvement reports<sup>[12, 21, 22]</sup>.

The presumption is that the high rate of pregnancy in those who came primarily with primary infertility is due to the improved intravaginal disposition of sperms after completing therapy. It is one of the secondary results of painful vaginal penetration.

Studies showed around 4% of vaginismus cases failed to achieve successful intercourse which could be due to the fact that a few vaginismus patients may require more than the program offered, because they may have underlying unresolved relationship problems, poor self-image, and

continuous fear of penile penetration, which necessitates a different approach.

In Saudi Arabia, the treatment program constitutes of psychosexual behavioral therapy, and sex education counseling, followed by assisted vaginal penetration training, coupled with motivation exercises. The clinical presentation of vaginismus cases is almost similar in different parts of the world, however, there is a great need to tailor the management plan based on cultural backgrounds. As the gynecologist is often the initial contact for vaginismus patients in the Arab society, training in sexual health should be provided for interested gynecologists who can treat these patients successfully [9-12].

Since a negative attitude and image toward sexual intercourse have been noticed in vaginismus cases, imagery and hypnosis can be used to combat negative attitudes toward sexual behaviors, which indeed showed a significant impact on vaginismus [23]. The problem is that the patients suffering from such a disorder are normally referred to a urologist or gynecologist or midwives.

Diagnosis and treatment of female sexual dysfunction bring unique challenges because of the conservative religious nature of Muslim females in the Middle East. Although some issues might introduce ethical dilemmas for the provider, there is a great need to address these cultural issues in order to facilitate health care delivery [24]. First of all, one of the major contributing risk factors in developing vaginismus is poor sexual knowledge. Secondly, vaginismus should be considered more of a family problem rather than the sole problem of the couple. The third possible risk factor could be related to the virginity concept and the traditional or religious role of the wife in certain societies. Cognitive Behavioral Therapy of vaginismus in these patients should have a large educational component including cognitive and behavioral to be able to modify specific traditional beliefs. The integration of the family, and not only of the partner, into the treatment process could prove uniquely beneficial for these patients [25, 35].

Our experience in Oman in treating vaginismus cases started in December 2019. A combined women's mental health clinic was established by the psychiatrist and her gynecology colleague at Royal Hospital which has been extended to Khoula Hospital recently. The management program in approaching vaginismus cases is almost similar to the one in Saudi Arabia, which is psychosexual behavioral therapy, sex education, counseling, Serotonin-Reuptake Inhibitors (SSRIs) with or without benzodiazepine followed by assisted vaginal penetration training, coupled with motivation exercises. The involvement of the patient's husband as part of the treatment plan reduced vaginal penetration fears significantly. However, we need to conduct a retrospective study in order to highlight different diagnostic and treatment challenges and the successful treatment modalities used in our patient population.

#### **Different reported effective intervention modalities for vaginismus**

Management of vaginismus should address all the problem dimensions whether biologically, psychologically, socially, or emotionally [Table2]. How to manage feelings around penetration and do exercises that gradually get patients used to penetration, are the focus of the treatment. Assessment and treatment should be done through a multidisciplinary team including a gynecologist, psychiatrist, physical

therapist, and sex therapist. Definition of treatment success should be reformulated to be broader and not to include just vaginal penetration achievement but also importantly should include couples' satisfaction, harmony and pleasure, self-worth, feeling no pain or anxiety, and no pelvic floor muscle tension [26, 27]. Education is crucial for couples to understand what they are dealing with and the possible ways of treatment [28].

Regarding the treatment of vaginismus, studies data are controversial and there is no clear evidence from high-quality RCTs (Randomized Clinical Trials) on the best therapeutic approach. Systematic desensitization and progressive vaginal dilation combined with relaxation techniques are widely used, some trials found no difference between systematic desensitization and the control intervention [26]. Some recent trials have found that systematic desensitization is effective and may help in physical aspects of vaginismus as well as fear of penetration [31]. Although the emphasis on systematic desensitization, CBT (Cognitive Behavioral Therapy) is thought to have the greater influence as a therapeutic modality in sex therapy. CBT helps in anxiety, depression, and cognitive distortion related to sexuality, blame, and self-worth which are important for the treatment success [26, 27]. Psychoeducation, mindfulness exercises, and behavioral homework exercises like examining genitals with a mirror, all may have benefits in the treatment of cases that couldn't tolerate any vaginal insertion (finger or tampon). [28] Pharmacotherapy (SSRIs, Benzodiazepine) may be needed in cases with comorbid anxiety or depression. Evaluation of Psychosocial aspects, interpersonal relationships, and complex attachment relationships in the family of origin is important in the treatment [29, 30].

Physical therapy with pelvic floor muscle exercises helps to gain control of vaginal muscles. Biofeedback with or without physical therapy helps to understand how to reduce tone in pelvic floor muscles. In severe cases of vaginismus, Botulinum toxin A was found to be a promising treatment through injection in the pelvic floor muscle, especially for vaginismus secondary to vulvar vestibular syndrome resistant to standard cognitive-behavioral and medical management. In the "Pacik multimodal program" Botulinum toxin A is injected into the lateral aspects of the vaginal orifice and progressive vaginal dilation under anesthesia, with follow up in the first year about 97% of the patients achieved comfortable intercourse or using a large dilator, with this program dilation progress was found to be quicker and more effective than waiting the 2-7 days for the Botox to become effective before initiating dilation [28].

A recent trial found Internet-based guided self-help interventions to be effective [13, 32]. Another study using Sacral Erector Spinae Plane Block (sacral ESP) combined with progressive vaginal dilation was found to improve treatment quality in vaginismus-resistant cases [33].

Treatment of vaginismus should be tailored according to each case, "a one-size fits all" approach will not lead to a successful treatment.

#### **The infrastructure needed to improve the care of vaginismus in the Middle East**

Patients with Genito pelvic pain penetration disorder (GPPPD), including vaginismus cases, need a multidisciplinary approach consisting of a well-experienced specialized team of "a gynecologist, physical therapist, and

psychologist/psychiatrist/sex therapist, should be involved in the assessment and treatment of vaginismus to address its different dimensions” [32] and may add pain management specialists in some cases who may need surgical intervention modalities. Some tend to use online specified modules and booster sessions through an eHealth platform as homework.

This Task is not easy for many health care providers in our setup due to various reasons.

One of the main issues is the lack of a well-organized training program belonging to a well-known academic institute close to the region, in which the interested professionals can have the training in it. It is a sensitive situation with many social, religious, and community obstacles to having dedicated clinics and professionals to look after sexual disorders in general [34].

**Research gaps and opportunities that should shape the future direction of vaginismus care plan**

At the moment, there is a lack of reliable evidence to help women and the professionals working with them make decisions about treatment [36].

Although we need well-designed trials of psychological therapies and drug treatments, we need more than that. We need to conduct research with high standards that address the needed treatment in broader aspects. While penetration

may be a desirable outcome, if it is not accompanied by the couple’s satisfaction and pleasurable feelings, then treatment effectiveness is questionable. Besides that, further research is needed to ascertain whether similar treatment strategies are applicable to women from different socio-cultural groups [34-36].

In one study Depression and anxiety were two important variables that affected the sexual functioning (Sexual quality of life) of participants of this study. As a result, we need to pay great attention to touch variables in research. The finding suggested being used as a basis for designing appropriate and effective interventions to prevent psychological disorders, especially anxiety and depression among women with vaginismus disorder [38, 39].

A recent clinical trial published in 2017 evaluated the efficacy of an internet-based guided self-help intervention for vaginismus as a possible new treatment [37].

In conclusion, it is important that women with vaginismus are well informed about treatment choices. Embarrassment and shame may cause them to delay looking for professional help, especially in the Arab world, yet early identification of the problem may reduce treatment time as well as the emotional and financial costs of treatment.

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**Table 1:** Vaginismus biopsychosocial challenges from diagnostic and management aspects

1.	Patients’ resistant to treatment if they have a history of vaginismus in their relatives or in the presence of a partner who say it is his or her fault
2.	The etiological causes of vaginismus could vary significantly according to socioeconomic factors even within a single country
3.	Cultural bound believes and misconception of the “breaking” of the hymen upon the first attempt of penetration causes pain
4.	Pressure to treat vaginismus, despite the presence cultural taboos which makes gynecologists in middle east societies are rarely adequately trained to have the understanding, support, or compassion that is required to effectively treat females with vaginismus
5.	Visiting the faith healers, which is a common cultural belief in middle east countries that is contributing vaginismus to the believes of supernatural influences (witchcraft, jinn possession, or evil eye), which affected the net result of reported vaginismus cases
6.	A few vaginismus patients may require more than the most common offered treatment program, because they may have underlying unresolved relationship problems, poor self-image, and an unrelenting fear of penile penetration, which might need a different approach
7.	Discussing sexual issues is considered a taboo in the middle east societies
8.	Even if the patients have a high educational and professional level and might seem ‘highly Westernized’, they are challenged with the traditional beliefs, mostly originating in childhood, related to virginity and the traditional or religious role of the wife

**Table 2:** Bio psychosocial management approach in vaginismus

1.	Assessment and treatment should be done through multidisciplinary team including: gynecologist, psychiatrist, physical therapist and sex therapist
2.	Education is crucial for the couples to understand what they are dealing with and the possible ways of treatment
3.	Use of systematic desensitization and progressive vaginal dilation combined with relaxation techniques
4.	CBT helps in anxiety, depression and cognitive distortion related to sexuality, blame and self-worth which are important for the treatment success
5.	Psychoeducation, mindfulness exercises and behavioral homework exercises like examining genitals with a mirror, all may have benefits in treatment of cases that couldn’t tolerate any vaginal insertion (finger or tampon)
6.	Pharmaco-therapy (SSRIs, Benzodiazepine) may be needed in cases with comorbid anxiety or depression
7.	Evaluation of Psychosocial aspects, interpersonal relationship and complex attachment relationships in the family of origin, is important in the treatment
8.	Physical therapy with pelvic floor muscle exercises help to gain control of vaginal muscles
9.	Biofeedback with or without physical therapy helps to understand how to reduce tone in pelvic floor muscles
10.	In severe cases of vaginismus, Botulinum toxin A was found to be a promising treatment through injection in the pelvic floor muscle especially for vaginismus secondary to vulvar vestibular syndrome resistant to standard cognitive-behavioral and medical management
11.	Internet-based guided self-help interventions showed to be effective
12.	Using Sacral Erector Spinae Plane Block (sacral ESP) combined with progressive vaginal dilation was found to improve treatment quality in vaginismus resistant cases

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