

## Research Article

## Characteristics and Management Outcome of Vaginismus

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### Abstract

Vaginismus, a common pelvic floor dysfunction characterized by involuntary vaginal muscle spasms, often impedes sexual intercourse and is exacerbated by cultural barriers in Indonesia, where sexual issues are taboo. Healthcare providers' lack of knowledge contributes to patient dissatisfaction with treatments. This study aimed to evaluate risk factors and management outcomes in 36 Indonesian women with vaginismus. Primary data, including demographic details, vaginismus history, severity, and FSFI-6 scores, were collected through interviews and medical records. Results showed that 34 participants were under 40 years old, 24 had been married for over two years, and 34 were university graduates. Most had normal BMI and no significant illness history. Among them, 28 participants had no history of penetration, with the majority having no medical, social, or psychological risk factor yet reporting good sexual satisfaction. Self-dilation was the single primary treatment, with a 19.23% (5 out of 26 subjects) achieving penetration (yet success rate need to be evaluated in further study). Younger age and higher education were notable characteristics among cases, suggesting a need for increased disease awareness. The study highlights that while traditional risk factors were not predominant, self-dilation therapy yielded moderate success, and patient satisfaction with sexual and interpersonal relationships remained high.

**Keywords:** sexual, dysfunction, genitopelvic, pain, vaginismus.

## Karakteristik dan Luaran Terapi Vaginismus

### Abstrak

Vaginismus, adalah disfungsi dasar panggul perempuan berupa spasme otot dasar panggul involunter yang menghambat hubungan seksual; dapat dipicu hambatan budaya di Indonesia karena isu seksual dianggap tabu. Kurangnya pengetahuan tenaga medis berkontribusi terhadap ketidakpuasan pasien terhadap tata laksana. Studi ini bertujuan untuk mengevaluasi faktor risiko dan luaran tata laksana 36 perempuan Indonesia dengan vaginismus. Data primer, termasuk rincian demografis, riwayat vaginismus, tingkat keparahan, dan skor FSFI-6, dikumpulkan melalui wawancara dan rekam medis. Hasil penelitian menunjukkan 34 peserta berusia di bawah 40 tahun, 24 peserta telah menikah selama lebih dari dua tahun dan 34 peserta adalah lulusan universitas. Sebagian besar memiliki IMT normal dan tidak memiliki riwayat penyakit signifikan. Sebanyak 28 peserta tidak memiliki riwayat penetrasi, dengan mayoritas tidak memiliki faktor risiko medis, sosial, atau psikologis; namun melaporkan kepuasan seksual yang baik. Usia yang lebih muda dan pendidikan yang lebih tinggi merupakan karakteristik yang menonjol di antara kasus, menunjukkan perlunya peningkatan kesadaran penyakit. Studi ini menunjukkan bahwa faktor risiko yang dievaluasi tidak mendominasi populasi, dilatasi mandiri saja mencapai penetrasi 19,23% (5 dari 26 subjek, namun tingkat kesuksesan perlu dievaluasi pada studi lebih lanjut), dan kepuasan pasien atas fungsi seksual dan hubungan interpersonal dengan pasangan tetap tinggi.

**Kata kunci:** seksual, disfungsi, genitopelvik, nyeri, vaginismus.

## Introduction

Vaginismus is one form of pelvic floor dysfunction, where repeated or persistent involuntary spasms occur in the outer muscles of the vagina, preventing penetration during sexual intercourse.<sup>1</sup> The prevalence of vaginismus is 1–7% worldwide, with the ratio known to increase from 5–17% in some places to date. Vaginismus is also a form of sexual dysfunction, causing distress in patient and their partner.<sup>2</sup> It was reported that 40% of women had some subjective reasons for not consulting a gynecologist, such as assuming it is a normal dysfunction with age, considering it unimportant, or believing that the disease cannot be treated. In addition, 22% of these female patients felt too intimidated to consult a gynecologist, while others considered medical personnel incapable of addressing this disorder.<sup>3</sup> In Indonesia, there is no data yet on vaginismus prevalence. Still, studies had reported female sexual dysfunction in Indonesia, totaling 9.2%, conducted on medical and non-medical groups with a total of 206 respondents. It was predicted that the actual number of vaginismus cases surpasses those shown by treatment-seeking behaviors due to feelings of embarrassment and stigma prevalent in numerous cultures worldwide.<sup>4</sup> Additionally, apart from the lack of knowledge, awareness, and courage of the community to consult professionals, barriers might also arise from doctors or healthcare professionals who had not fully mastered the diagnosis and management of vaginismus as a disease due to the lack of education provided in general medical education, medical residency, and even professional meetings. These will cause confusion and disappointment among patients, making only about one-third of women with sexual dysfunction problems consult a doctor.<sup>5</sup>

Within the scope of scientific understanding, the definite characteristics and etiology of vaginismus remained elusive, failing therapies provided, both psychologically (such as cognitive behavioural therapy) and biologically (such as botox and electromyography).<sup>6</sup> The American College of Obstetricians and Gynecologists (ACOG) highlights various etiologies and risk factors associated with female sexual dysfunction, ranging from anxiety, depression, and histories of sexual or intimate partner violence to neurological disorders, other health conditions (diabetes, hypertension, genitourinary syndrome in menopausal woman), female genital mutilation, hysterectomy perfectionistic tendencies, and adverse medication effects. This multifaceted spectrum of potential triggers underscores the complexity of addressing vaginismus and related sexual health issues.<sup>6</sup>

Nevertheless, these diverse factors might be linked to the socio-cultural traits specific to each community. Notably, there has been a lack of research delineating the general characteristics of vaginismus, especially among Indonesian women. Recognizing the significance of comprehending the array of medical and psychosocial risk factors associated with vaginismus, this study focuses on the female population of Indonesia. It is hoped that a deeper insight into the characteristics of vaginismus patients would lead to the identification of risk factors, and insight into the initial treatment's outcome would help vaginismus management. Hence, we could better help physicians diagnose and manage patients afflicted with this condition in the future.

## Methods

This study employed a cross-sectional design, collecting primary data through interviews and obtaining the Lamont stage from medical records. We conducted the study at the JUN (Jakarta Urogynecology) Center YPK from 2023 to 2024. A consecutive sampling method was used, including 36 women. Subjects with incomplete data will be managed through statistical analysis. The variables observed were demographic characteristics (age, education level, number of marriages, duration of marriage, history of sexual violence, BMI, and menopausal status), vaginismus history and severity. According to the Lamont stage, the first degree of severity indicates a spasm of the pelvic floor that can be relieved, allowing the patient to relax during the examination. The second degree shows a generalized pelvic floor spasm, where the patient is unable to relax. The third degree represents a severe pelvic floor spasm, causing the patient to lift her buttocks to avoid being examined. The fourth degree is the most severe form, where the patient completely retreats to prevent examination, pulling herself back and closing her legs.<sup>7</sup> Various vaginismus risk factors (history of vaginal stitching, past illnesses, history of psychological problems, history of abortions, genitourinary issues, genital mutilation, relationship dissatisfaction, religion and religious restrictions, income, exercise routine/physical activity, accompanying individuals, and sexual position preferences) were being evaluated. For those who were able to have intercourse, we evaluated the Female Sexual Function Index-6 (FSFI-6). The initial treatment strategy outcome was evaluated as well. We analyzed our data using SPSS ver. 20. Ethical approval was obtained from the Faculty of Medicine Ethics Committee, University of Indonesia (FKUI) KET-1418/UN2.F1 /ETIK/PPM.00.02/2022.

## Results

Among 36 patients, the characteristic and Lamont Severity Scale were resumed in Table 1.

**Table 1. Subject Characteristics and the Lamont Severity Scale**

Characteristics	Frequency
Age distribution	
<30 year	21
30-40 year	13
≥41 year	2
Mean±SD age	30.81±4.94
Marriage Duration	
< 1 year	6
1-2 year	6
>2 years	24
Median	3.00
Range	1-15
Education	
High School	2
Undergraduate	28
Post Graduate	6
Income	
<Rp 3.999.999	2
Rp 4.000.000-9.999.999	10
Rp 10.000.000-25.000.000	14
>Rp 25.000.000	10
Menopause	
Premenopause	36
Postmenopause	0
BMI (kg/m <sup>2</sup> )	
<18.00	2
18.00-22.99	22
23.00-24.99	5
25.00-26.99	2
>27.00	5
Median	21.91
Range	17.07-40.35
Past Medical History	
Bronchitis	1
Coccydynia	1
GastrointestinalReflux Disease (GERD)	1
Urinary Tract Infection (UTI)	1
PCOS	1
None	31
Number of Marriage	
1	35
2	1
Vaginismus History (Previous Partner)	
No Vaginismus	5
Vaginismus	3
No Previous Partner	28
Penetration History (Before Treatment)	
No	28
Yes	8
Prefered Intercourse Position	
Men on Top	28
Women on Top	6
Both Men/Women on Top	1
Others, Spooning	1
Vaginismus Severity Lamont)	
Lamont1	2
Lamont2	5
Lamont3	1
Lamont4	3
No Data	25

As for the distribution of possible risk factors in the study population, various factors were considered, including history of vaginal surgery, sexual violence, physiological disorders, nonmedical vaginal procedures, vaginal complaints, religious and cultural barriers, and routine physical activity. Possible risk factors among populations are summarized in Table 2.

Understanding sexual satisfaction is crucial for promoting overall well-being and fostering healthy relationships. This study examined general sexual satisfaction by asking patients and their partners regarding satisfaction with each other sexual function and their relationship. The overall sexual satisfaction of the patient and their partner was also studied and summarized in Table 3.

Among 36 subjects, 28 never had penetration, while 8 subjects had penetration before but still suffer from vaginismus. The initial treatment outcomes were summarized in Table 4.

Among the subjects who had not experienced penetration before treatment, three subjects succeeded with initial self-dilatation. Of these, one had a grade 4 Lamont and was managed through a combination of incision, botulinum toxin, and self-dilatation over a period exceeding six months. The other two subjects, both with grade 2 Lamont, were managed with self-dilatation alone; one succeeded within 3-6 months, while the other achieved success after more than six months.

Of the 14 subjects who did not succeed with self-dilatation as the initial treatment, seven proceeded to a second round of treatment. Among them, three eventually achieved penetration. These subjects initially underwent three months of self-dilatation, followed by continued self-dilatation. Their success was achieved in different time frames: one within three months, another between three to six months, and the third after more than six months. Unfortunately, the Lamont grades for these three subjects were not recorded.

The analysis of the distribution of risk factors in the groups of subjects who achieved conversion in penetration capability either by initial management or by second management is shown in Table 5.

Among these six subjects, there were no reports of vaginal wound stitching, history of sexual assault, recent medical-vaginal issues within the last month, or religious/social-cultural restrictions. One participant underwent infantile circumcision. All reported satisfaction with their sexual function and their relationships with their partners, who also expressed satisfaction with their sexual function and relationships.

## Discussion

The distribution of population characteristics revealed that most subjects were under 40 years old, with an average age of 30.81 years. This is similar to the average age in other studies,<sup>8,9</sup> which reported average ages ranging from 27.88 to 30.4 years and an average duration of vaginismus from 2 to 7.8 years. These findings indicate a consistent trend across different geographical locations, suggesting that the demographic factors related to vaginismus are relatively uniform and suggesting that this is a burden for women of reproductive age. In addition, most subjects in this study were found to have been married for more than two years, further underscoring the prolonged lack of awareness and the delayed response to

seeking help for vaginismus even compared to other community data. This prolonged period before seeking help also suggests that many couples may experience significant distress and challenges in their marital relationships due to this condition, highlighting the necessity for increased educational efforts and early intervention programs to address better and manage this condition within affected populations. The predominant education level among subjects was undergraduate level, which is consistent with other studies,<sup>8,9</sup> indicating that higher-educated groups are more aware of vaginismus. Therefore, this issue may be more prevalent in the broader population, particularly those with lower education levels who have not yet identified or sought help.

**Table 2. Medical, Social and Psychological Risk Factors**

Characteristics	Frequency
History of Vaginal Surgery	
No	33
Yes	3
History of Sexual Violence	
No	34
Yes	2
History of Psychological/Psychiatric Disorder	
None	30
Depression	1
Anxiety	1
Anxiety & Adaptation disorder	1
Anxiety & Paranoia	1
Trauma	1
Depression & Borderline Personality Disorder (BPD)	1
History of NonMedical Vaginal Procedure	
No	32
Infantile Circumcision	1
Toddler Circumcision	3
Vaginal Complain (Within 1 Month)	
None	24
Dry Vagina	6
Itchy Discharge	3
Dry Vagina & Itchy Discharge	1
Incomplete Voiding	2
Religious & Cultural Barrier	
None	35
Taboo of Vaginal Penetration	1
Routine Exercise	
None	30
Routine	6

**Table 3. Overall Sexual Satisfaction (at Evaluation Moment)**

Characteristics	Frequency
Patient's Satisfaction with Her Sexual Function	
Not Satisfied	14
Satisfied	22
Patient's Satisfaction with Her Relationship with Partner	
Not Satisfied	5
Satisfied	31
Partner's Satisfaction with Patient's Sexual Function	
Not Satisfied	13
Satisfied	23
Partner's Satisfaction with His Relationship with Patient	
Not Satisfied	8
Satisfied	28

**Table 4. Initial Treatment Outcome**

Initial Treatment	Frequency	Treatment Outcome	Frequency
Self dilatation	26	No penetration yet	14
		Penetration succeed	2
		Just started	10
Hypnotherapy	1	No penetration yet	1
Incision, Botulinum, and self-dilatation	1	Penetration succeed	1

Although all patients were premenopausal, some complained of vaginal dryness within the last month, a condition typically more common in postmenopausal patients. This observation underscores the importance of assessing and addressing factors contributing to sexual arousal and lubrication in premenopausal patients, ensuring comprehensive care and enhancing the quality of their sexual health, as it suggests that patients may not have been optimally aroused before intercourse.<sup>10</sup> Physicians need to be aware of this issue to provide appropriate guidance and support to improve patients' sexual experiences. A portion of the population consists of women in their second marriage and 5 out of 8 subjects admitted to not experiencing vaginismus with their previous partners. This observation suggests the presence of distinct factors within different sexual partnerships that may influence the occurrence of vaginismus. Moreover, it implies that previous sexual relationships, particularly those outside of the current marriage, might be associated with the development or absence of vaginismus in subsequent intimate encounters.

Further exploration into the dynamics of these past relationships and their impact on current sexual health could provide valuable insights into understanding and addressing vaginismus within marital contexts.

The majority of the study population exhibits normal BMI. This indicates that while BMI may influence overall health, it is not an independent factor in determining the presence of vaginismus. It is suggested that maintaining a normal BMI alone does not necessarily prevent or alleviate vaginismus. It is likely that BMI, in combination with other factors such as psychological, neurological, and possibly hormonal influences, plays a role in the condition. This aligns with other studies that found BMI categories are not a significant factor in vaginismus complaints. Additionally, most subjects did not have any other diseases within the last month, reinforcing that vaginismus in this population is less likely to be influenced by concurrent physical health issues. This further emphasizes the importance of exploring the interplay of BMI and other non-physical contributors for a more comprehensive understanding and effective treatment of vaginismus.<sup>11</sup>

The preferred position during intercourse for most subjects with vaginismus is the “man on top” position. As this position involves deep penetration, it could exacerbate these spasms and contribute to the pain and discomfort associated with vaginismus.<sup>4,12,13</sup> To alleviate this issue, it is recommended that women with vaginismus explore alternative sex positions that allow for more control over the depth and angle of penetration, such as the “spooning” position or positions where the woman is on top. These positions can help reduce the pressure on the pelvic floor muscles and make sexual activity more comfortable and enjoyable.<sup>14</sup>

A total of 8 subjects reported prior penetration experiences but continued to express complaints about vaginismus. Unfortunately, data regarding

the severity of their condition were not available, hindering analysis of whether the degree of their current vaginismus affected the treatment outcomes. Out of the 36 subjects, only 11 of them were provided information on the Lamont grade, with the majority falling within grades 1-2. This finding contrasts with other studies, which have shown that most of their subjects had Lamont grades of 3 to 4.<sup>14,15</sup> This could be attributed to the lack of data availability for some of our subjects, which might have influenced the observed distribution of Lamont grades, potentially leading to discrepancies compared to other studies. Therefore, comprehensive data collection for all subjects is needed to obtain a more precise understanding of the prevalence and severity of vaginismus within the studied population.

**Table 5. Characteristics of Subjects Achieving Conversion in Penetration Capability**

Characteristics	Frequency
Age	
<30 year old	5
30-40 year old	1
Marriage Duration	
<1 year	3
1-2 year	3
Education	
Undergraduate	5
Post Graduate	1
Income	
Rp 4,000,000-9,999,999	1
Rp 10,000,000-25,000,000	3
>Rp 25,000,000	2
Body Mass Index	
18.00-22.99	5
23.00-24.99	1
History of Previous Illness	
Coccydynia	1
Negative	4
Polycystic Ovary Syndrome	1
History of Psychological/Psychiatric Problems	
None	4
Depression	1
Anxiety & Adaptation Disorder	1
Exercise	
None	5
Routine	1
Intercourse Position Preference	
Men on Top	5
Women on Top	1
Lamont Stage	
2	2
4	1
Not Data Available	3
FSFI 6 Score	
≥19	3
No Intercourse within 1 Month	3

Among the subjects who initially were unable to achieve penetration, most began treatment with self-dilatation. A smaller group received alternative therapies such as hypnotherapy, vaginal incision, or botulinum toxin (Botox) treatments. Outcomes varied: one woman (with grade 2 Lamont) achieved penetration after 3-6 months of self-dilatation, while two others (with grade 2 and 4 Lamont, respectively) succeeded after more than six months of treatment. Additionally, among the women who achieved penetration and continued with self-dilatation, one reached this milestone within 3-6 months, and two others after more than six months; however, Lamont grade data for these latter cases were not available. As major initial management, the overall success of self-dilatation only was 19.23% (5 out of 26 subjects). Another study reported success rates of self-dilatation therapy exceeding 90%. This discrepancy may be attributed to several factors, such as patient adherence to self-administered therapy in this study.<sup>7</sup> Besides, this study was across-sectional study which evaluated success retrospectively. We haven't re-evaluated those who continue treatment, yet some of them might reach penetration in the further dilatation treatment. Further study is needed to evaluate patient adherence. However, our findings were aligned with a clinical trial study that provided a multimodal management program, including intravaginal injections of on a Botulinum toxin A (Botox) and bupivacaine, progressive dilation under conscious sedation, indwelling dilators, and follow-up, which found that 17% of its subjects were able to engage in pain-free intercourse after undergoing therapy for 5.1 weeks.<sup>14</sup> The alignment between the outcomes of this study and the clinical trial emphasizes the effectiveness of multimodal therapeutic approaches in addressing vaginismus. By combining various interventions such as self-dilatation, hypnotherapy, vaginal incision, botox injections, and progressive dilation techniques, along with a diligent follow-up, significant improvements in the patient's ability to achieve pain-free intercourse have been evident. These results highlight the importance of personalized and comprehensive treatment strategies in managing vaginismus effectively and enhancing the quality of life for affected individuals. Possible associated risk factors, such as religious and cultural taboos, were investigated and found not to be significant contributors to our population. However, this should be compared with women with no vaginismus complaints for deeper analysis. Despite this, other factors may play a

role in the occurrence of vaginismus. Additionally, patient-reported sexual satisfaction remains high, with both patients and their partners expressing contentment with sexual function and interpersonal relationships. This suggests that sexual satisfaction may stem from a combination of factors, including mutual fulfillment within the marital relationship. This contrasts with other studies using the Golombok Rust Inventory of Sexual Satisfaction (GRISS) indicator that shows vaginismus negatively affects various domains of sexuality, including sexual satisfaction. These findings underscore the complexity of sexual health and the need for a nuanced understanding of how different factors interact to influence sexual experiences and relationships in individuals with vaginismus.<sup>16</sup> This suggests that different social and cultural backgrounds among our population may play a role in these sexual satisfaction differences.

Age of the penetration-converting women were younger than 30 years old. This younger population have more favorable treatment outcomes. Other reports found no significant difference in those who succeed in vaginismus treatment.<sup>17</sup> However, from our cross-sectional study, we could not explain how younger age was favorable to better treatment outcomes. After the vaginismus patient succeeded in reaching intercourse, they did not exhibit signs of sexual dysfunction, as demonstrated by their FSFI-6 score, which was 19 or above. This finding suggests that achieving conversion from incapacity for penetration-to-penetration capability is correlated with no sexual dysfunction, as evidenced by the FSFI-6 scores observed. However, FSFI-6 may not adequately capture the nuances of sexual dysfunction experienced by vaginismus patients as the tool was being developed for women having intercourse within one month, which poses a drawback in the context of vaginismus, where coitus is often infrequent or avoided altogether due to fear of pain or failure. This could lead to an underestimation of the condition's impact on sexual function, as the infrequency of intercourse might not be fully captured by the questionnaire, resulting in an incomplete assessment of the patient's sexual health. Consideration of alternative assessment tools, such as the Multidimensional Vaginal Penetration Disorder Questionnaire (MVPDQ),<sup>18</sup> Vaginal Penetration Cognition Questionnaire (VPCQ)<sup>19</sup>, may offer a more comprehensive understanding of sexual dysfunction in this population. However, further validation of such tools in the Indonesian context is necessary, as

well as the development of the best or universally accepted questionnaire for assessing vaginismus.

The limitations of the study were that some questionnaires were answered based on retrospective recall, which may introduce recall bias. This study mainly evaluated the characteristics of vaginismus women and the associated risk factors of vaginismus. A comparison to normal population data is needed for a deeper analysis of the risk factors of vaginismus. Those with initial treatment success information were subjects who were in follow-up visits during the sampling period. Studies on evaluating treatment success and recommendations for treatment strategies should be reported in the future. So do the instruments in evaluating women's sexual function with vaginismus; further study and questionnaire development are needed.

### Conclusion

Self-dilation therapy, utilized as the single primary or single further treatment, 19.23% (5 out of 26 subjects) had achieved successful penetration. However, success rate needs to be evaluated in further study, perhaps a cohort. Despite these challenges, overall patient satisfaction with their sexual function and interpersonal relationships with their partners, as well as the general satisfaction of partners with the sexual function of patients with vaginismus and their interpersonal relationships, remained high. Moving forward, it is recommended to compare the characteristics of vaginismus women to those of the normal population to identify risk factors of vaginismus, evaluate patient adherence, and evaluate treatment success contributing factors. It is also recommended to develop specialized questionnaires to evaluate the sexual function of patients with vaginismus more accurately.

### Conflict of Interest

There is no conflict of interest in this study.

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