

Correlation between vaginal discharge and female sexual function by using the female sexual function index: An analytical cross-sectional study

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Abstract

Aim: To evaluate the relation between vaginal discharge and female sexual function (FSD) by using the female sexual function index (FSFI).

Study design: An analytical cross-sectional study

Place and Duration: Obstetrics and Gynecology department of Isra University Hospital and Hajiani day and night hospital Hyderabad Pakistan from January to December 2021

Methodology: A total of 81 women were included in this study. Women were divided into 3 groups, having 27 women in each group. Group A included women having physiologic vaginal discharge, in group B women had itching with abnormal vaginal discharge and in group C, women had abnormal vaginal discharge and no itching. The study excluded women who had chronic diseases, were older than 40 years, had given birth within the previous year, were single or did not live with their husbands, or had a partner who had a sexual dysfunction because these conditions could hurt sexual function. The FSFI survey was then completed by the participants. It is a questionnaire with 19 items divided into the following 6 domains: pain, satisfaction, orgasm, lubrication, desire, and arousal. Each response is given a score between 0 and 5. A domain score is produced by adding and multiplying the results of the questions in each domain by a fixed factor.

Results: ANOVA showed a significant mean difference for Desire, Lubrication and satisfaction scores concerning the three studied groups, $p < 0.05$. Post hoc analysis on desire, lubrication and satisfaction scores between vaginal discharge groups, results showed samples of abnormal vaginal discharge without itching have significantly lower scores on desire as compared to samples of itching along with vaginal discharge and physiologic vaginal discharge samples, ($p < 0.01$).

Conclusion: In conclusion, the characteristics of vaginal discharge and its link to FSD have been investigated. Women with the pathological vaginal discharge with itching had more problems in desire, arousal, lubrication, orgasm, satisfaction and pain when compared to women with physiologic vaginal discharge or vaginal discharge without itching.

Keywords: Female sexual dysfunction, women, vaginal discharge, itching, vaginal health

Introduction

Sexual dysfunction is a major health issue that is common in women and can have an impact on both the woman and her partner's quality of life. ¹ Numerous studies have been conducted to create diagnostic tools for FSD and to pinpoint disease risk factors. ² The Female Sexual Function Index (FSFI), is one of the most widely used and validated tools for assessing FSD. ³ There have been many reported risk factors for FSD. The primary factors previously investigated as risk factors for FSD are menopause, obesity, infertility, vaginal surgeries, including vaginal delivery, and pelvic radiation. ⁴

Vaginal discharge, which is typically a sign of vaginitis, can be painful for some women and may persist or return even after therapy. According to Bro, 14% of women without a complaint, compared to 20% of women complaining of vaginal discharge had normal results. ⁵

Instead of the cause or a conclusive diagnosis, perceptions of the discharge's odor, and colour, may cause women to worry about their appearance and feel less confident. Although a couple of studies done internationally on this issue but yet no study done in Pakistan. Because of this, the current study's goal was to determine whether vaginal discharge's features, rather than its causation, could have an impact on FSD via the FSFI.

Methodology

The current analytical cross-sectional study was carried out between January and December 2021, at the Obstetrics and Gynecology department of, Isra University Hospital and Hajiani day and night hospital Hyderabad Pakistan among healthy women who visited the Gynaecology department with a complaint of vaginal discharge. Before gathering data, approval was taken from the committee. Patients were provided written permission to take part in the study. A total of 81 women were included in this study. Women were divided into 3 groups, having 27 women in each group. Group A included women having physiologic vaginal discharge, in group B women had itching with the pathological vaginal discharge with itching and in group C, women had abnormal vaginal discharge without itching.

The study excluded women who were sick, were older than 40 years of age, had given birth within the previous year, were single or did not live with their husbands, or had a partner who had a sexual dysfunction because these conditions could hurt sexual function. Incomplete FSFI questionnaire responses from participants were also disqualified.

Parity, type of delivery, time since the last delivery, history of spontaneous and induced abortions, use of contraception, and the status of vaginal discharge, were all collected from each participant. The features of the discharge (throughout the previous month) were also noted.

A discharge that was either yellow or green was considered abnormal. Malodor that increased or did not increase with sexual activity was referred to as abnormal odor. A discharge with a cottage cheese-like or thicker consistency was considered abnormal.

The FSFI survey was then completed by the participants. It has 19 items divided into the following 6 domains: pain, satisfaction, orgasm, lubrication, desire, and arousal. Each response is given a score between 0 and 5. A domain score is produced by adding and multiplying the results of the questions in each domain by a fixed factor. The total FSFI score is the total score acquired across all domains. FSD is a score of 26.55 or less overall. Better sexual functioning is indicated by a higher overall score or for any domain.

SPSS Version 23.0 was used for data analysis. Mean with standard deviation were reported on FSFI and its sub-domains scores across physiologic vaginal discharge, abnormal vaginal discharge with itching and abnormal vaginal discharge without itching samples. One-way ANOVA was used to compare these mean scores concerning studied groups and post hoc analysis was done using Tukey's test of multiple comparisons for significant parameters of FSFI. P-values less than 0.05 were kept significant. Bar diagrams were also reported to display the mean scores of FSFI.

Results

Table-1 reports among physiologic vaginal discharge samples mean score for desire was 3.60 (SD=±0.01), the mean score for arousal was 4.50 (SD=±0.01), the mean score for Lubrication was 4.79 (SD=±0.06), the mean score for orgasm was 4.36 (SD=±0.23), the mean score for satisfaction was 3.67 (SD=±0.31), the mean score for pain was 4.70 (SD=±0.54) and the total mean score of FSFI was 25.61 (SD=±0.90).

Among samples of abnormal vaginal discharge with itching mean score for desire was 3.60 (SD= \pm 0.01), the mean score for arousal was 4.50 (SD= \pm 0.01), the mean score for Lubrication was 4.80 (SD= \pm 0.01), the mean score for orgasm was 4.40 (SD= \pm 0.01), the mean score for satisfaction was 3.61 (SD= \pm 0.08), the mean score for pain was 4.80 (SD= \pm 0.01) and the total mean score of FSFI was 25.71 (SD= \pm 0.08). Whereas among samples of abnormal vaginal discharge without itching mean score for desire was 3.27 (SD= \pm 0.71), the mean score for arousal was 4.28 (SD= \pm 0.77), the mean score for Lubrication was 4.47 (SD= \pm 0.6), the mean score for orgasm was 4.16 (SD= \pm 0.83), the mean score for satisfaction was 4.06 (SD= \pm 0.81), the mean score for pain was 4.74 (SD= \pm 0.86) and a total mean score of FSFI was 24.97 (SD= \pm 2.80). ANOVA showed a significant mean difference for Desire, Lubrication and satisfaction scores concerning the three studied groups, $P < 0.05$.

Table 2 reports the post hoc analysis of desire, lubrication and satisfaction scores between vaginal discharge groups, results showed samples of abnormal vaginal discharge without itching have significantly lower scores on desire as compared to samples of abnormal vaginal discharge with itching and physiologic vaginal discharge samples, ($p < 0.01$), similarly, samples of abnormal vaginal discharge with itching has significantly higher scores on lubrication as compared to samples of abnormal vaginal discharge with itching and significantly lower mean score for lubrication as compared to samples with physiologic vaginal discharge, finally for satisfaction samples of abnormal vaginal discharge without itching has significantly higher mean scores as compare to physiologic vaginal discharge and significantly lower mean scores as compare to sample of abnormal vaginal discharge with itching. ($P < 0.05$) considered statistically significant. The bar diagram 1 and 2 demonstrates the mean comparison of FSFI sub-domain scores with vaginal discharge samples.

Table 1: Mean Comparison of FSFI and its Sub Domain Scores with Vaginal Discharge

Samples (n=81)

FSFI Domains	Group						p-value
	Physiologic Vaginal Discharge (n=27)		Itching with pathological discharge (n=27)		Pathological Vaginal Discharge Without Itching (n=27)		
	Mean	SD	Mean	SD	Mean	SD	
Desire	3.60	0.01	3.60	0.01	3.27	0.71	<0.01*
Arousal	4.50	0.01	4.50	0.01	4.28	0.77	0.11
Lubrication	4.79	0.06	4.80	0.01	4.47	0.6	<0.01*
Orgasm	4.36	0.23	4.40	0.01	4.16	0.83	0.18
Satisfaction	3.67	0.31	3.61	0.08	4.06	0.81	<0.01*
Pain	4.70	0.54	4.80	0.01	4.74	0.86	0.81
FSFI Total	25.61	0.90	25.71	0.08	24.97	2.80	0.22

*p<0.05 was considered statistically significant using one-way ANOVA

Bar Diagram 1: Desire Arousal Lubrication Orgasm Satisfaction Pain

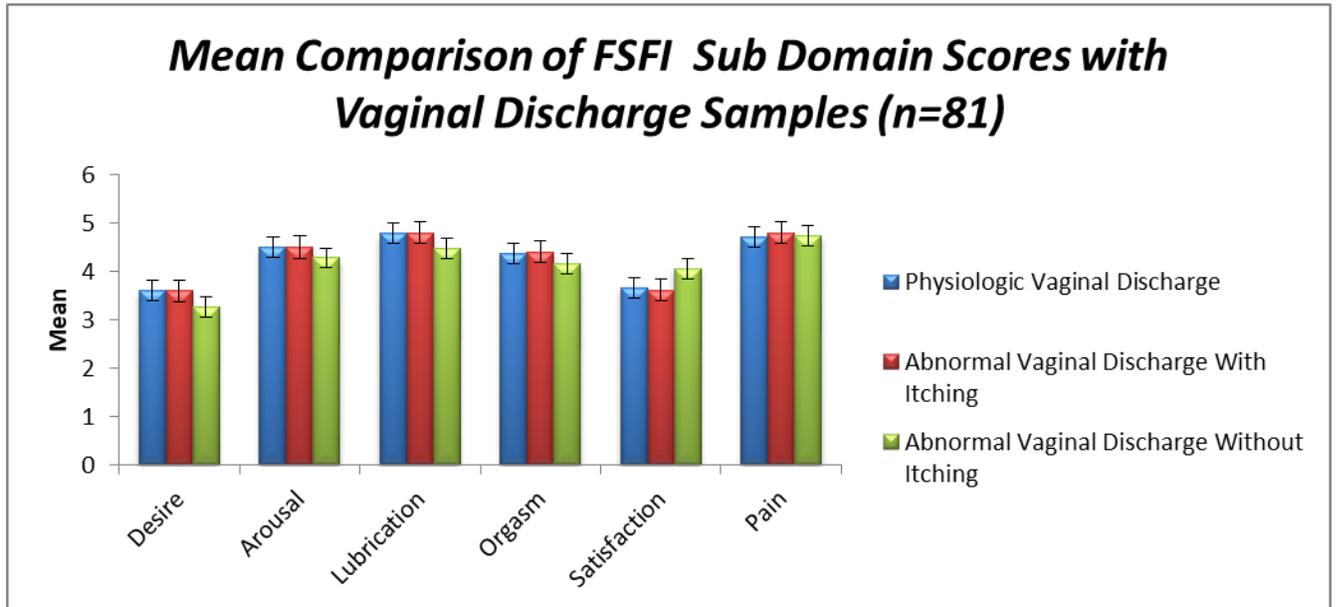
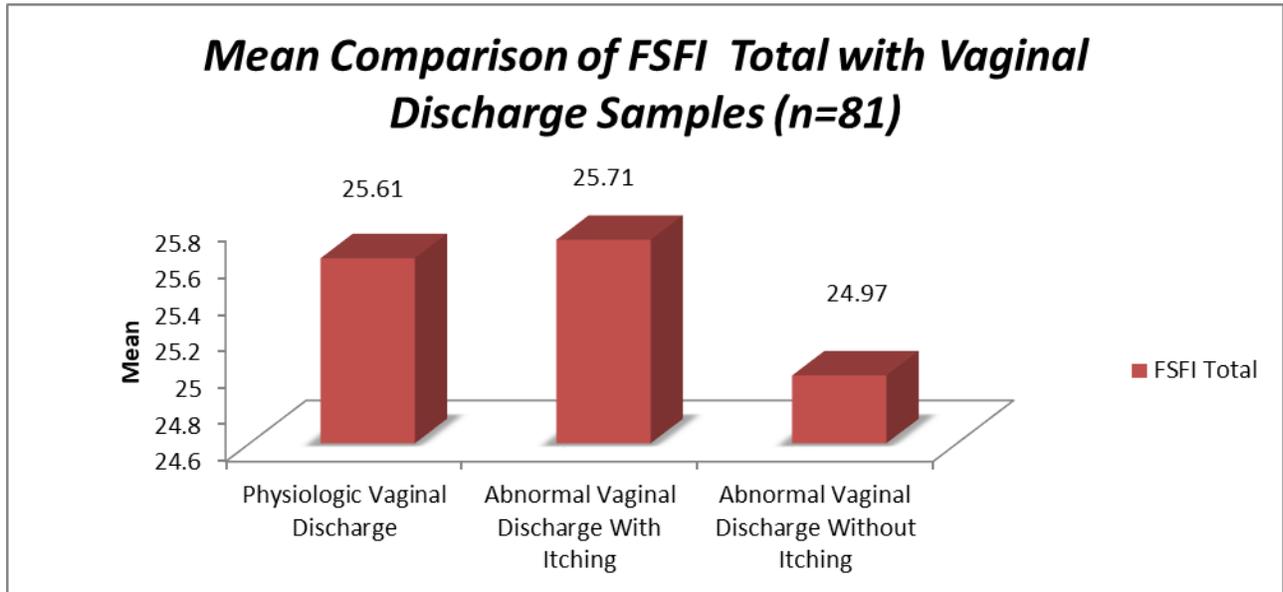


Table 2: Post-Hoc Analysis for Desire, Lubrication and Satisfaction Scores of Vaginal Discharge Samples

Parameters	Group	Compare with	Mean Difference	P-value
Desire	A	B		0.99
	A	C	0.33	0.01*
	B	C	0.33	0.01*
Lubrication	A	B	-0.01	0.99
	A	C	0.33	<0.01*
	B	C	-0.33	<0.01*
Satisfaction	A	B	0.05	0.90
	A	C	-0.38	0.01*
	B	C	0.44	<0.01*
*p<0.05 was significant				
A: Physiologic Vaginal Discharge , B: Abnormal Vaginal Discharge With Itching & C: Abnormal Vaginal Discharge Without Itching				

Bar Diagram 2:**Discussion**

The study's small sample size and reliance on subjective information on vaginal symptoms are among its drawbacks. The only diagnostic criteria employed were the patient's medical history. The association between the woman's feelings regarding her vaginal discharge and the FSFI score was investigated because the study did not focus on the cause of the vaginal discharge. We thought that a woman's perception of her discharge's odor, colour, consistency, and duration—rather than the cause or a specific diagnosis—might lead to a negative body image and, as a result, encourage sexual dysfunction. Our study observed a significant difference in desire, arousal, lubrication, orgasm, satisfaction and pain when among all 3 groups that are women with physiologic vaginal discharge, vaginal discharge without itching and vaginal discharge with itching. Women with itching and pathological vaginal discharge had more above mentioned problems.

The following questions were asked of the study participants: How frequently did you have sexual desire or interest over the previous four weeks? What would you say is the intensity of your sexual interest or desire? How frequently did you experience being "turned on" during sexual activity or contact? During sexual engagement or intercourse, how would you rank your level of sexual arousal (or "turn on"]? How certain were you that engaging in sexual activity or having a sex act would cause you to become aroused?

How frequently have you had sexual activity or intercourse where you were satisfied with your level of arousal? How frequently did you lubricate yourself during sexual activity or intimate contact? How challenging was it to lubricate yourself (become "wet") during sexual activity or intercourse? How frequently did you stay lubricated (or "wet") till the end of the sexual activity or intercourse? How difficult was it for you to stay lubricated (or "wet") through the entire sexual act or intercourse? How frequently did you experience an orgasm (climax) during sexual stimulation or intercourse? How tough was it for you to obtain the orgasm (climax) during sexual stimulation or intercourse? What level of satisfaction did you feel about your capacity to experience an orgasm (climax) during sexual activity or intercourse? How pleased are you with the level of emotional intimacy you have with your spouse during sexual activity?

How content have you been with your partner's sexual interest? How happy are you with your whole sexual experience? How frequently did you feel pain or discomfort when having a vaginal penetration? How frequently did you feel pain or discomfort after vaginal penetration? How would you describe the amount (intensity) of your pain or discomfort during or after vaginal penetration?^{6,7}

In an unsimilar international study, the prevalence of FSD and abnormal vaginal discharge did not significantly correlate, although women with abnormal discharges had considerably higher mean FSFI scores than women in the control group. This could be a result of the small sample size, the link between frequent sex and vaginal infections, or fundamental problems with the FSFI questionnaire.⁸ The FSFI has drawn criticism since it relies on penile-vaginal sex rather than being entirely dependent on clitoral feeling and orgasm, and it evaluates organs like the vagina that may be thought to have a purely reproductive purpose and not be necessary for clitoral stimulation or orgasm.⁹

Conclusion

In conclusion, the characteristics of pathological vaginal discharge and their link to FSD have been investigated. Women with itching and pathological vaginal discharge had more problems in desire, arousal, lubrication, orgasm, satisfaction and pain when compared to women with physiologic vaginal discharge or vaginal discharge without itching

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Permission

The ethical review committee permitted the study

Conflict of interest

None

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