Sexual function, depression, anxiety, and vulvovaginal candidiasis

To the Editor,

We read the paper by Moshfeghy et al. (1) entitled "association of sexual function and psychological symptoms including depression, anxiety, and stress in women with recurrent vulvovaginal candidiasis" published in June 2020, volume 21, issue 2 of your journal with great interest. Female sexuality is a highly complex and multifactorial issue. The effect of the vaginitis that every woman experiences "at least once" in her lifetime, especially candidal, on sexual function cannot be underestimated. The authors aimed to make an objective assessment, as far as possible, using the Female Sexual Function Index (FSFI) the most commonly used questionnaire in the world for this assessment. However, in our opinion determining some other variables while evaluating the problem could strengthen the study. In addition, when examining the regression analysis, it is unclear if this was univariate or multivariate and, therefore, the relationship of the variables with the subject is not revealed. We would like to highlight three issues on this subject. Firstly, and most importantly, the demographic characteristics of the patients have not been presented. The characteristics of the study and control groups such as age, body mass index (BMI), occupation, education level, and substance addiction were not given. Especially, age affects sexual functions concerning BMI body perception. The second important issue was the respective "male sexual" function. According to the "Global Study of Sexual Attitudes and Behaviors", 28% of sexually active men in the general population have at least one sexual problem (2). Periodic to frequent early ejaculation was reported by 14% of men, slightly more frequently than erection difficulties (10%), and a total of 9% complained of lack of interest in sex (2). These male dysfunctions will clearly also affect female sexual function (3). In all societies, especially in developing countries, the effect of male sexual dysfunctions on women is overlooked. It is acceptable that this study did not include an evaluation of male sexual function, but it might be appropriate to mention it as an important limitation. The third and last issue is that conditions such as polycystic ovary syndrome (PCOS), endometriosis, pelvic masses, and urinary incontinence, which can cause psychological and sexual dysfunction in women, have not been excluded. For instance, although different results were reported for sexual dysfunction in PCOS patients, it was stated that depression and anxiety are more common in these patients and, in evaluations made with FSFI, there are often variations in satisfaction scores, especially concerning hirsutism and BMI (4,5). Considering the results reported by the authors, mentioning these factors, which have been reported to have an effect on depression, anxiety, and sexual function, would provide a clearer evaluation of the findings of the study for us readers.

Emre Başer[1], Demet Aydoğan Kırmızı[1], Mustafa Kara[2], Ethem Serdar Yalvaç[1]

[1]Department of Obstetrics and Gynecology, Yozgat Bozok University Faculty of Medicine, Yozgat, Turkey

[2]Clinic of Obstetrics and Gynecology, Ahi Evran University Training and Research Hospital, Kırşehir, Turkey

References

1. Moshfeghy Z, Tahari S, Janghorban R, Najib FS, Mani A, Sayadi, M. Association of sexual function and psychological symptoms including depression, anxiety and stress in women with recurrent vulvovaginal candidiasis. J Turk Ger Gynecol Assoc 2020; 21: 90-6.
2. Nicolosi A, Laumann EO, Glasser DB, Moreira ED, Paik A, Gindell C; Global Study of Sexual Attitudes and Behaviors Investigators' Group. Sexual behavior and sexual dysfunctions after age 40: the global study of sexual attitudes and behaviors. Urology 2004; 64: 991-7.

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Address for Correspondence: *Emre Başer*
e.mail: emrebasermd@gmail.com ORCID: orcid.org/0000-0003-3828-9631
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3. Farna F, Janghorbani M, Merghati-Khoei E, Raisi F. Vaginismus and its correlates in an Iranian clinical sample. Int J Impot Res 2014; 26: 230-4.
4. Jedel E, Waern M, Gustafson D, Landén M, Eriksson E, Holm G, et al. Anxiety and depression symptoms in women with polycystic ovary syndrome compared with controls matched for body mass index. Hum Reprod 2010; 25: 450-6.
5. Hollinrake E, Abreu A, Maifeld M, Van Voorhis BJ, Dokras A. Increased risk of depressive disorders in women with polycystic ovary syndrome. Fertil Steril 2007; 87: 1369-76.

Author's Response

Dear Editor,

We would like to thank Başer et al. (1) for their interest in our paper and for taking the time to express their concerns. In their letter to the editor, they noted some points that need to be clarified by the authors (1). First, although the demographic characteristics of the patients did not report as a table in the results but we assessed the characteristics including age, education, occupation status and body mass index in case and control group and there was no significant relationship between demographic characteristics in two groups (Table 1). Second, we agree with the probable effect of male sexual dysfunction on female sexual function and the issue could be one of our study limitation. Third, in the method of our article, we mentioned that all individuals in case group were married women with only a history of at least four episodes of vulvo-vaginal candidiasis per year according to documented diagnosis of symptomatic episodes of infection in their clinic records (2). They were not known cases of other gynecologic problems such as polycystic ovary syndrome, endometriosis, pelvic masses, and urinary incontinence because according to mentioned method, we assessed each participant' health information in sample recruitment process and these women who had these problems were not included in the study. Also, this issue was stated in our article about the control group consisted of healthy individuals who were referred to clinics for routine screening. Therefore, we tried to select case and control groups due to difference in history of recurrent vulvovaginal candidiasis.

Zeinab Moshfeghy[1], Somayeh Tahari[2], Roksana Janghorban[3], Fatemeh Sadat Najib[4], Arash Mani[5], Mehrab Sayadi[6]

Table 1. Comparison demographic characteristic between the case and control groups

Variable	Groups		p*
	Case	Control	
Age (mean ± SD)	32.80±7.64	31.82±7.01	0.506
Education (n, %)			
Illiterate	0	2 (4)	0.595
Primary school	9 (18)	7 (14)	
Secondary school	11 (22)	9 (18)	
High school	4 (8)	5 (10)	
High school diploma	10 (20)	15 (30)	
University degree	16 (32)	12 (24)	
Occupation (n, %)			
Housewife	43 (86)	42 (84)	0.424
Employee	7 (14)	8 (16)	
Monthly income (n, %)			
Less than 20.000.000 IRR	7 (14)	7 (14)	0.424
20.000.000-40.000.000 IRR	36 (72)	32 (64)	
More than 40.000.000 IRR	7 (14)	11 (22)	
BMI (kg/m^2) (mean ± SD)	24.8±2.6	25.2±2.5	0.134

*P<0.05 was considered statistically significant; t-test and chi-square were used for variables.
SD: Standard deviation, IRR: Iranian rial, BMI: Body mass index

References

1. Başer E, Aydoğan Kırmızı D, Kara M, Yalvaç ES. Sexual function, depression, anxiety, and vulvovaginal candidiasis Candidiasis and psycho-sexual symptoms. J Turk Ger Gynecol Assoc 2021 Mar 5. doi: 10.4274/jtgga.galenos.2021.2020.0195
2. Moshfeghy Z, Tahari S, Janghorban R, Najib FS, Mani A, Sayadi M. Association of sexual function and psychological symptoms including depression, anxiety and stress in women with recurrent vulvovaginal candidiasis. J Turk Ger Gynecol Assoc 2020; 21: 90-6.