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Correspondence and requests for materials should be addressed to A.A.R. (aarouzi@gmail.com)

The prevalence of sexual dysfunction in the female health care providers in Jeddah, Saudi Arabia

Abdulrahim A. Rouzi[1], Nora Sahly[1], Dana Sawan[1], Souzan Kafy[1,2] & Faten Alzaban[3]

[1]Department of Obstetrics and Gynecology, King Abdulaziz University, [2]Department of Obstetrics and Gynecology, Erfan and Bagedo Hospital, [3]Department of Psychiatry, King Abdulaziz University, Jeddah, Saudi Arabia.

The objective of this study was to determine the prevalence of sexual dysfunction in Saudi and non-Saudi female health care providers in Jeddah, Saudi Arabia. One -hundred twenty (60 Saudi and 60 non-Saudi) sexually active female health care professionals in Jeddah, Saudi Arabia, were anonymously surveyed using the English version of the female sexual function index questionnaire. The individual domain scores for pain, arousal, lubrication, orgasm, satisfaction, pain, and overall score for the Saudi and non-Saudi women were calculated and compared. The two groups were comparable in demographic characteristics. No statistically significant differences were found between Saudi and non-Saudi women in desire (P = .22) and arousal scores (P = .47). However, non-Saudi women had significantly higher lubrication (P < .001), orgasm (P = .015), satisfaction (P = .004), and pain scores (P = .015). The overall scores in Saudi and non-Saudi women were low (23.40 ± 4.50 compared with 26.18 ± 5.97), but non-Saudi women had a significantly higher overall score (P = .005). Taken together, sexual dysfunction is prevalent among Saudi and non-Saudi female health care providers, with Saudi women demonstrating lower scores in four sexual function domains and the overall score.

Female sexual dysfunction (FSD) is a highly prevalent and often underestimated problem in the general community[1]. It is defined as a disorder of sexual desire, orgasm, arousal, and sexual pain that results in significant personal distress. It is a multifactorial, age-related, progressive problem[2]. The Female Sexual Function Index (FSFI), which was developed by Rosen et al. in 2000, is a 19-item, self-report measure of sexual dysfunction in women[3]. The FSFI was developed as a brief, multidimensional questionnaire with subscales to assess the major components of sexual function in women, including sexual desire, arousal, orgasm, pain, and satisfaction. It has been shown in several validation studies that the FSFI is highly reliable and valid[4–6]. Thus far, the FSFI has been translated into more than 20 languages, and it has become the de facto ″gold standard″ in the assessment of female sexual function and an indispensable tool in clinical research of FSD[7]. Few reports in Saudi Arabia have described FSD due to the relatively sensitive nature of the theme and the religiosity of the population[8,9]. The aim of this study was to assess the FSD using the English version of the FSFI in female health care providers in Jeddah, Saudi Arabia.

Results

During the study period, a total of 120 female health care professionals were enrolled in the study. Of these participants, 60 were Saudi and 60 non-Saudi. Ten (7.7%) women (7 Saudi and 3 non-Saudi) declined to participate. The two groups were comparable in demographic characteristics. The age (mean ± SD) of the respondents was 35.0 ± 6.13 years and 36.9 ± 6.89 years for Saudis and non-Saudis, respectively (Cohen's d 0.29; P = .152). Similarly, the parity was 2.7 ± 1.57 and 2.1 ± 1.16 for Saudi and non-Saudi women (Cohen's d, 0.41; P = .26); Saudi and non-Saudi women had been married for 10.3 ± 6.31 and 9.4 ± 5.81 years, respectively (Cohen's d, 0.15; P = .42). There were no statistically significant differences between the Saudi and non-Saudi groups in the mean desire score (Cohen's d, 0.22; P = .22) and arousal score (Cohen's d, 0.13; P = .47; Table 1). However, non-Saudi women had significantly higher lubrication (Cohen's d, 0.71; P < .001), orgasm (Cohen's d, 0.44; P = .015), satisfaction (Cohen's d, 0.53; P = .004), and pain scores (Cohen's d; 0.44; P = .015). The overall scores of Saudi and non-Saudi women were low (23.40 ± 4.50 compared with 26.18 ± 5.97), but non-Saudi women had a significantly higher score (Cohen's d, 0.52; P = .005).

Table 1 | Comparison of Mean Female Sexual Function Index Scores Between Saudi and non-Saudi Health Care Providers

FSFI Domains	Saudi (n = 60)	Non-Saudi (n = 60)	P-Value
Desire	3.91 (0.79)	4.13 (1.14)	.222
Arousal	4.22 (1.02)	4.37 (1.29)	.467
Lubrication	3.69 (0.95)	4.36 (0.95)	<.001
Orgasm	4.01 (1.16)	4.55 (1.27)	.015
Satisfaction	3.70 (1.14)	4.37 (1.37)	.004
Pain	3.89 (1.12)	4.41 (1.22)	.015
Total Score	23.41 (4.50)	26.18 (5.97)	.005

Data are presented as mean (standard deviation) unless otherwise specified.
Abbreviation: FSFI, Female Sexual Function Index.

Discussion

Impaired sexual function can have damaging effects on the self-esteem, sense of wholeness and interpersonal relationships of women. It is often emotionally distressing[10]. Cultural beliefs as well as inconsistencies in the levels of normal sexual function and the relevance of sexual function in individuals complicates the classification and determination of FSD. The use of the FSFI is currently considered the gold standard[11]. It has been validated in many samples of women with mixed sexual dysfunctions, and it has been demonstrated to possess excellent psychometric properties. More recent validation studies have correctly identified 77% of women with sexual dysfunction and 85% of women with normal sexual function[12,13]. In the literature, risk factors for FSD include age, history of sexual abuse or sexually transmitted infection, depression, lower educational attainment, overall state of general happiness, physical health, life-style and sexual experience[6,7]. Female sexual dysfunction is a prevalent health problem that has been inadequately investigated in the Arab world. However, there are few published reports on FSD from Saudi Arabia. Two studies used a non-validated Arabic version of FSFI in pregnancy and in women with female genital mutilation[9,14]. Another study used the Arizona Sexual experience Scale in women with unstable angina or non-ST-elevation myocardial infarction[8]. This study aimed to assess sexual function in health care professionals in Jeddah, Saudi Arabia. The main strengths of this study are its prospective nature, high participation rate (92.3%), adequate sample size, and use of the English version of FSFI (not the non-validated Arabic version). The lack of previous local studies has made it difficult to make relevant comparisons between our findings and those of other authors. Overall, our findings demonstrate that FSD is displayed in our population of young and employed female health care providers in Saudi Arabia. Moreover, Saudi women showed significantly lower FSFI scores as well as lower scores in four sexual function domains.

Methods

This cross-sectional study was performed during scientific meetings at Erfan and Bagedo Hospital, Jeddah, Saudi Arabia. Ethical approval was granted by the Ethics Research Committee of Erfan and Bagedo Hospital. This study was performed in accordance with relevant guidelines and regulations. The target sample included female health care professionals (physicians and nurses) who lived in Jeddah. Informed consent was obtained from all of the participants prior to recruitment, and they were assured of the confidentiality of the data by a number (subject identifier), which was inscribed on the questionnaire. The English version of the FSFI questionnaire and a cover letter explaining the objective of the study were distributed to female health care providers. Participants were asked to complete the anonymous questionnaire privately and return it. The self-assessment instrument included 19 items that tapped the women's reports of their sexual experience over the last four weeks; the 19 questions covered six domains: desire (two questions), arousal (four questions), lubrication (four questions), orgasm, satisfaction, and pain (three questions each)[3]. Responses to questions 1, 2, 15 and 16 were scored from 1 to 5; all of the other questions were scored from 0 to 5. Individual domain scores were determined by the sum of the scores of the individual questions in the domain and the sum was multiplied by the domain factor in the FSFI. The overall scale score was calculated by the sum of the six domain scores, which from 2 to 36[11]. Women with FSFI scores < 26.55 were categorized as experiencing sexual dysfunction, while respondents with scores above this cutoff value were categorized as experiencing normal sexual function[11]. To determine the difficulties experienced on each of the six domains of the FSFI, the cutoff scores were obtained from previous reports[4,10,11]. Thus, participants were considered to have difficulties in a particular domain if they demonstrated scores < 4.28 on the desire domain, <5.08 on the arousal domain, <5.45 on the lubrication domain; <5.05 on the orgasm domain, <5.04 on the satisfaction domain, and <5.51 on the pain domain. The data were analyzed using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA), version 22.0. Descriptive statistics were computed for all of the variables. The chi-square test was used to compare the categorical variables, while the independent t-test was used to compare the mean scores between Saudi and non-Saudi women. Cronbach's alpha was used to assess the internal reliability of the items within each scale. The results are expressed as the mean $\pm$ standard deviation (SD). Differences were considered significant at the 5% level ($p < 0.05$).

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Author contributions

A.R.: Design of the study, analysis of the data, and writing of the manuscript. N.S.: Performance of the study, collection and analysis of the data. D.S.: Performance of the study. S.K.: Performance of the study and collection of the data. F.A.: Performance of the study. All authors reviewed the manuscript.

Additional information

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