

The impact of sexual dysfunction on the quality of life of women: an observational study

O impacto da disfunção sexual na qualidade de vida feminina: um estudo observacional

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RESUMO | INTRODUÇÃO: A saúde sexual envolve diversos componentes em relação à sexualidade, como biológico, cultural, psicológico e social. Quando alguns desses fatores são atingidos, pode-se originar um quadro de disfunção sexual. **OBJETIVO:** investigar a qualidade de vida em mulheres com disfunção sexual. **MATERIAIS E MÉTODOS:** Estudo observacional comparativo, de corte transversal, realizado em mulheres de 18 a 59 anos do CAAP da EBMSP. Excluídas: mulheres com histórico de doença psiquiátrica grave, portadoras de doenças crônico-degenerativas neurológicas, com dispareunia de causas orgânicas, em tratamento fisioterapêutico e gestantes. Foi utilizado a FSFI ≥ 26 para o grupo com disfunção e < 26 para o grupo comparação. Instrumentos de avaliação aplicados: FSFI e 36-Item Short-Form Health Survey (SF-36). A comparação das medianas dos domínios do SF-36 e FSFI entre os grupos foi realizada pelo teste Mann-Whitney (teste não paramétrico), e das variáveis categóricas com a disfunção sexual foi feita a partir do teste qui-quadrado. **RESULTADOS:** Amostra 36 pacientes, 18 em cada grupo. As variáveis sociodemográficas e clínicas que apresentaram diferença estatística foram renda (0,001) e escolaridade (0,011). No FSFI, todos os domínios apresentaram significância (0,00). No SF-36, ao comparar os dois grupos, 06 domínios apresentaram significância estatística. **CONCLUSÃO:** Os resultados mostram que mulheres com disfunção sexual apresentam um impacto negativo em alguns dos aspectos da qualidade de vida. Importante salientar que, a escolaridade e a renda familiar não foram homogêneas entre os grupos, sendo assim, diante da característica do estudo, não é possível aferir relação causa e consequência na disfunção sexual com a qualidade de vida das participantes.

PALAVRAS-CHAVE: Disfunção sexual feminina. Qualidade de vida. Comportamento sexual.

ABSTRACT | INTRODUCTION: Sexual health involves several components in relation to sexuality, such as biological, cultural, psychological and social. When some of these factors are reached, a picture of sexual dysfunction may result. **OBJECTIVE:** To investigate quality of life in women with sexual dysfunction. **MATERIALS AND METHODS:** A cross-sectional, observational, observational study of 18- to 59-year-old women from the EBMSP CAAP. Excluded: women with a history of severe psychiatric illness, carriers of neurological chronic degenerative diseases, with dyspareunia of organic causes, in physiotherapeutic treatment and pregnant women. FSFI ≥ 26 was used for the group with dysfunction and < 26 for the comparison group. Assessment instruments applied: FSFI and 36-Item Short-Form Health Survey (SF-36). The comparison of the medians of the SF-36 and FSFI domains between the groups was performed by the Mann-Whitney test (non-parametric test), and the categorical variables with the sexual dysfunction were done using the chi-square test. **RESULTS:** Sample 36 patient, 18 in each group. The sociodemographic and clinical variables that presented statistical difference were income (0.001) and schooling (0.011). In the FSFI, all domains presented significance (0.00). In the SF-36, when comparing the two groups, 06 domains presented statistical significance. **CONCLUSION:** The results show that women with sexual dysfunction have a negative impact on some aspects of quality of life. It is important to emphasize that schooling and family income were not homogeneous between the groups, so, due to the characteristics of the study, it is not possible to measure cause and consequence relationship in sexual dysfunction with quality of life of the participants.

KEYWORDS: Female sexual dysfunction. Quality of life. Sexual behavior.

Sexual health, which is part of reproductive health, is defined by the World Health Organization as a state of physical, emotional, mental, and social well-being in relation to sexuality, not only characterized by the absence of disease¹. Sexuality, in turn, is one of the indicators for quality of life and is influenced by several factors, such as biological, psychological, socioeconomic, ethical and spiritual, not only restricted to the reproductive goal, but also strengthens amorous relationships and between people. Through the interaction of such factors, from experiences, intimacy, beliefs and feelings, experienced only or with the partner, it is possible to obtain a determined female sexual response, organized in a successive and coordinated way, totaling 4 phases: desire, excitement, orgasm and resolution^{3,4}.

When some of the factors related to sexuality are compromised, there may be a picture of female sexual dysfunction (FSD), characterized by a clinically significant disturbance in a person's ability to respond or experience sexual pleasure. In Brazil, according to the Brazilian Sexual Behavior Study, 49% of 1,219 women reported at least one type of sexual dysfunction, the most common of which is sexual interest disorder⁶.

From the points of view, recognizing the importance of sexual health as part of integral health and its articulation with the various domains that make up the quality of life of an individual, the intrinsic correlation between them is clear^{1,7}. Given the paucity of well-designed studies that analyze the relationship between female sexual dysfunction and quality of life, especially in women residing in Bahia, without other underlying diseases and using questionnaires such as SF36 and FSFI, this study aims to verify the association of quality of life of women with sexual dysfunction.

Study design and context

This is a comparative, cross-sectional observational study conducted between March 2016 and August 2017, composed of women between 18 and 59 years of age, organized based on the sexual complaints of the patients. Those who presented clinical complaints of sexual dysfunction were then referred to the CAAP (Pelvic Floor Care Center), located at the Advanced Physiotherapy Clinic (CAFIS) of the Bahiana School of Medicine and Public Health (EBMSP), Brotas, in Salvador, Bahia.), for service through research that evaluates the Efficacy of Cognitive-Behavioral Psychotherapy in the Sexual Function and Quality of Life of women with Sexual Dysfunction.

Participants

The inclusion criteria used for patients with FSD were: to have a score in the Female Sexual Function Index (FSFI) of 26 or less, to be between 18 and 59 years old, and to be spontaneously in agreement with the objectives of the study. The following were excluded: patients with neurological degenerative chronic diseases, with dyspareunia of organic causes, patients under physiotherapeutic treatment and pregnant women. The group containing patients without sexual dysfunction, on the other hand, had to present a FSFI score higher than 26 points, but it included all the other criteria pointed out in the first group.

Regarding sociodemographic and clinical analysis, data were collected from groups with and without sexual dysfunction in relation to age, marital status, schooling, family income, births and their types, gestations and use of medications. The women included signed the Free Consent Form and voluntarily clarified and completed a questionnaire with clinical, gynecological and sociodemographic data. In addition, three scales were applied, namely:

the SF-36 (Short-Form Health Survey), composed of 36 items and grouped into 8 components, which add a score of 0 to 100 points, with the objective of evaluating the quality of life⁸. The Female Sexual Function Index (FSFI), a self-report with 19 items covering six sexual domains (desire, arousal, lubrication, orgasm, satisfaction and pain), with total scores ranging from 2 to 36 points and the highest scores represent a better sexual function. Thus, patients with FSFI ≤ 26 points suggest female sexual dysfunction⁹ Statistical analysis

Made from the completion of the BDI, SF36, FSFI, socioeconomic and TCLE scales. The Statistical Package for Social Sciences (SPSS), version 17.0 for Windows was used for the elaboration of the database and the descriptive analysis. To test the normality of the numerical variables, descriptive statistics, histogram analysis and the Shapiro Willk Test were used. The categorical variables were expressed in absolute value and frequency. The numerical variables that presented asymmetric distribution were evidenced through median and interquartile range, while those with symmetrical distribution were expressed as mean and standard deviation. The comparison of the medians of the SF-36 and FSFI domains between the groups with and without female sexual dysfunction was then performed by the Mann-Whitney test (non-parametric test), whereas the comparison of categorical variables with sexual dysfunction was made from of the chi-square test.

The present study was approved by the Ethics

and Research Committee of the Bahian School of Medicine and Public Health (EBMSP), as per resolution 466/12 under CAAE: 44137115700005544 and 14425813900005544.

Results

We selected 18 women with and without sexual dysfunction, totaling a sample of 36 patients. The ages were similar in both groups and there was no statistical difference ($p = 0.38$), with the FSD group presenting the highest mean (34.56 ± 9.7 years). The average family income without SDF was higher, ranging from 5.0 (3.0 - 7.25) minimum wages and was statistically significant ($p = 0.001$). Marital status presented inverse results, with 61.1% of women with SDF being single, contrasting with 38.9% of those without FSD.

In relation to schooling, statistically significant ($p = 0.001$) between the two groups, women without FSD had a higher level of schooling, with 85.4% having complete or incomplete higher education, while women with FSD had a more between school levels. Regarding the type of delivery, most of the sample was nulliparous ($p = 0.00$). Regarding medication use, 66.7% of women without FSD used contraceptives ($p = 0.739$). No woman in either group made use of hormone replacement.

Table 1. Sociodemographic and Clinical Characteristics of the Sample of Individuals with and without FSD. Salvador, Bahia, Brasil, 2017 (to be continued)

Variable	With FSD (n=18)	Without FSD (n=18)	P Value
	Mean \pm SD	Mean \pm SD	
Age(years)	34,56 \pm 9,7	31,94 \pm 7,78	0,381
	Median (I – Q)	Median (I – Q)	
Family income	2,0 (1,0 – 3,25)	5,0 (3,0 – 7,25)	0,001
Marital status	n (%)	n (%)	1,000
Single	11 (61,1)	7 (38,9)	
Married	7 (38,9)	11 (61,1)	
Divorced	0	0	
Widow	0	0	

Table 1. Sociodemographic and Clinical Characteristics of the Sample of Individuals with and without FSD. Salvador, Bahia, Brasil, 2017 (conclusion)

Education			0,001
Elementary School	2 (11,1)	0	
High school	7 (38,9)	3 (16,7)	
Incomplete higher	3 (16,7)	3 (16,7)	
Graduated	6 (33,3)	12 (66,7)	
Clinical Data			
Gestational Variables	Median (I – Q)	Median (I – Q)	
Gestation	0,0 (0,0 – 1,0)	0,0 (0,0 – 2,0)	0,594
Parturition	0,0 (0,0 – 1,0)	0,0 (0,0 – 1,25)	0,335
Type of parturition	n (%)	n (%)	0,000
Cesarian	3 (16,7)	1 (5,6)	
Vaginal	2 (11,1)	4 (22,2)	
Not applicable	12 (66,7)	10 (55,6)	
Cesarian and vaginal	1 (5,6)	3 (16,7)	
Use of medication			0,739
Does not use	13 (72,2)	6 (33,3)	
Contraceptive	5 (27,8)	12 (66,7)	

Test: Mann-Whitney

In relation to the FSFI domains, (all domains presented statistical significance ($p = 0.000$)).

As for the SF-36 analysis (table 2), it was observed that in the two groups (with and without FSD), the pain domains ($p = 0.000$), social aspects ($p = 0.000$), general health status 0.000), capacity ($p = 0.034$) and mental health ($p = 0.005$) presented statistical significance.

Table 2. Comparison of the SF-36 domains of the Sample of Individuals with and without FSD. Salvador, Bahia, Brasil, 2017

Domains	With FSD (n=18)	Without FSD (n=18)	P Value
	Median (I – Q)	Median (I – Q)	
<u>Mental health</u>	60 (52 – 65)	72 (62 – 81)	0,005
<u>General Health Status</u>	50 (40 – 60)	77 (57 – 88,2)	0,000
<u>Social aspects</u>	50 (37,5 – 62,5)	75 (59,3 – 100)	0,000
<u>Pain</u>	35 (20 – 50)	79 (62 – 92,5)	0,000
<u>Capacity</u>	90 (55 – 96,2)	97,5 (90 – 100)	0,034
Vitality	57,5 (50 – 65)	65 (43,7 – 75)	0,355
Limitation	100 (43,7 – 100)	100,0 (68,7 – 100)	0,899
Emotional Aspects	50 (0 – 100)	83,3 (33,3 – 100)	0,227

Test: Mann-Whitney

Discussion

In this study, we evaluated women with and without sexual dysfunction in a group of 36 participants. However, a relevant fact that should be emphasized is the fact that, from a sociodemographic point of view, the groups are statistically different. The purpose of this study was to analyze the quality of life profile of women with and without the diagnosis of sexual dysfunction. The fact that the group without dysfunction has a higher income and schooling may have an influence on the quality of life of the participants in this group. The document published by the World Health Organization in 2006, reflects on the relationship between sociodemographic aspects and sexual function. According to this publication, populations with greater financial and social vulnerability may have repercussions on their sexual life¹.

When assessing the quality of life of the two groups, from the SF36, 5 of the 8 domains were compromised in patients with sexual dysfunction, such as pain ($p = 0.000$), social aspects ($p = 0.001$), general health status. This finding is reaffirmed in one of the most respected studies on female sexuality, the National Health and Social Life Survey (NHSLs), conducted in 1759 American women of 18 to 59 years old, in which he already pointed out the intrinsic association between female sexual dysfunction and feelings of unhappiness experienced by them, thus affecting two essential aspects: physical and emotional¹⁰. In addition, when analyzing the definition of quality of life proposed by the WHO, it is noted that it is based on the individual's perception of their expectations, standards and concerns when it is inserted in a cultural context and surrounded by a value system¹. Therefore, the summation of factors such as beliefs, cultural practices, attitude towards sex and sexuality, body image of oneself and the other, physical traumas and biological processes are capable of shaping the feminine perception in the cultural, biological and psychic context in which this woman is presented^{11,12}.

When analyzing the study population without sexual dysfunction, there is a very important point: the relation between physical activity and general well-being, including sexuality¹³. In a Brazilian study, containing 370 women between 40 and 65 years

of age, the risk of female sexual dysfunction was strongly associated with sedentary lifestyle, with the prevalence of sexual dysfunction being higher among sedentary women (78.5%), against 57.6% of those who practiced regular physical activity¹⁴. This fact can be justified in two ways: from the neurological point of view, the physical activity increases the synaptic transmission of monoamines and promotes the release of endogenous opioids, promoting the sensation of humor and pleasure after exercise¹⁵. In addition, the physical activity also favors the formation of the body image, which associated with fantasies and eroticism, also help in the construction of the subject and in his perception about sexuality.

When FSFI was analyzed, all 6 domains (pain, desire, arousal, orgasm, lubrication and satisfaction) were statistically significant ($p = 0.00$) in comparison with the two groups. Such a finding can be explained by Basson's own model of sexual response, when he affirms that sexuality and sexual function in women follow a circular path, dependent on emotional and relationship stimuli that interfere in a dynamic way in all phases of the cycle¹⁸. Thus, changes in the female perception about sexuality, whether by beliefs, maladaptive cognitive schemas, cultural aspects, conjugal conflicts, or biological causes, such as depression, endometriosis, diabetes and other diseases can negatively interfere with sexual function and harm the diverse domains linked to it^{6,16}. In our study, however, in excluding patients with psychiatric, vascular and neuroendocrine diseases, we have tried to emphasize the importance of the psychological component in the pathogenesis of sexual dysfunction, which can be statistically confirmed by the involvement of all sexual domains evaluated in FSFI in patients with FSD.

Concerning the sociodemographic issues of our work, it was observed that only schooling ($p = 0.011$) and income ($p = 0.001$) were statistically significant, which was in agreement with most of the literature^{6,12,18}. It is known that there is an association between lower educational and economic levels and sexual dysfunction, since such women tend to have less information about sexual health and knowledge about their own body, as well as lower demand/access to medical and multidisciplinary care. In the NHSLs study, it was found that those with higher

education education were almost half as likely to present low sexual desire, orgasm problems, dyspareunia and sexual anxiety when compared to those who did not graduate in high school¹⁰.

When one observes the age, for example, several studies prove a relation between increase of the age with the reduction of the sexual desire^{11,12}. It should be inferred, however, that the increase in age is related to clinical comorbidities, neuroendocrine alterations and prolonged use of medications⁶. In our study, however, in which women who had debilitating clinical conditions, such as severe degenerative and psychiatric conditions, were excluded, there was no association between aging and reduction of sexual desire, thus suggesting that women who remain healthy with advancing age satisfactory sexual health¹⁹.

In the present study, contraceptive use was not statistically significant, showing that such a factor would not be a risk for the development of FSD. Such a finding is not a consensus in the literature. In one study, analyzing more than 13,000 women, documented that there was no significant change in desire with combined oral contraceptive use²⁰. Conversely, in a retrospective study of about 1,100 women, it was reported that those using hormonal contraception of any type had less sexual activity, excitement, pleasure and orgasm, and more difficulty with lubrication²¹.

This paper presents some limitations. Initially, because it is an observational, cross-sectional study, it does not allow the establishment of the cause-effect relationship. Another limitation is the subjectivity and intimacy of the subject in question, causing some women to respond according to what they believe to be more socially accepted or even because of the difficulty in interpreting the questions related to their sexuality. In an attempt to circumvent possible skewed responses, self-administered and easily interpreted questionnaires were selected. In addition, sexual partners with some type of sexual dysfunction were not excluded, which could be a bias in this study, since their partners could be indirectly affected, as they could have a lower frequency and duration of sexual activity.

Conclusion

The relationship between female sexual dysfunction and its impact on some aspects of quality of life, such as pain, general state, emotional aspects, capacity and mental health were then verified in this study. However, the fact that the groups are statistically different can not infer a causal relationship between the presence of the diagnosis of Sexual Dysfunctions and Quality of Life.

Therefore, this theme needs to be explored better, so that we can adequately measure the influence of Sexual Dysfunctions on the quality of life of women. In this way, more studies are needed, with homogeneous groups in order to finalize these possible relations.

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Author contributions

Barreto APP was responsible for the data collection, literature review and manuscript production. Nogueira A was responsible for the literature review and the manuscript production. Teixeira B was responsible for the data collection. Brasil C was responsible for the statistical analysis of the data. Lemos A was responsible for the statistical analysis of the data. Lordêlo P was responsible for the supervision of the research, methodological review of the study, and critical revision of the manuscript.

Competing interests

No financial, legal or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

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