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Therapeutic Approach in Female Sexual Dysfunctions in an Outpatient Clinic of Sexology in the Public Health System: A Longitudinal and Prospective Study

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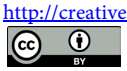
Abstract

INTRODUCTION: Sexuality is one of the parameters of quality of life, and it is essential to include care for sexual dysfunctions in primary health care. OBJECTIVE: To evaluate the therapeutic approach in female sexual dysfunction in a public health outpatient clinic. DESIGN: A prospective cohort of women with sexual dysfunctions in an outpatient clinic of sexology in the Public Health System. The Female Sexual Function Index (FSFI) and scored 0 - 10 their sexual satisfaction were applied at the beginning and end of the follow-up. RESULTS: Eighty-nine women were included with a median age of 45 years, 69 (77.5%) had less than 11 years of schooling and 95.5% lived with a partner. The main reasons for referral for follow-up at the outpatient clinic of sexuality were dysfunction of hypoactive sexual desire disorder in 67.4% and pain related to sexual function in 46%. The average number of consultations was five and the main therapeutic interventions were guidance and clarification on sexuality (86.5%), use of topical estrogen (56.2%), and relaxation techniques (37.1%). All FSFI-19 domains had better post-intervention rates ($p \leq 0.005$). Considering the domains of the FSFI-19, the medians of desire,



arousal, lubrication, orgasm, pleasure and pain were higher in the post-intervention period in relation to the pre-intervention period ($p \leq 0.0001$ for all analysis). In addition, the score given by the participant on their sexual satisfaction was higher at the post-intervention time compared to the pre-intervention period ($p \leq 0.0001$). CONCLUSION: In public health, even with the care being performed by different professionals in each consultation, we conclude that through simple interventions, it is possible to improve the sexualities of the women attended. Still, offering care in sexuality is fundamental as part of primary health care and the training of medical professionals.

Keywords

Public Health, Quality of Life, Treatment, Female Sexual Dysfunction

1. Introduction

Female sexual dysfunctions are a significant public health problem. Estimates of prevalence vary substantially and affect approximately 49% of Brazilian women, following the world average which reaches 41% [1] [2] [3] [4]. Sexual function is determined by multiple aspects, including biological, sociocultural, relational and psychological factors. Women have resorted increasingly to medical care to resolve sexual issues, but services offered to meet this demand in the context of public health are still scarce [4] [5] [6]. In addition, less than 10% of doctors have the initiative to inquire about the sexual complaints of their patients [6] [7] [8]. Gynecologists play a fundamental role in the assessment of sexual function, listening and advising patients, most of the times, the entrance door to these issues [9] [10] [11] [12] [13].

Therapeutic approaches for sexual dysfunctions have involved increasingly multidisciplinary teams with physicians, psychologists, physiotherapists, among others. As we have not yet experienced a health model with a fully individual biopsychosocial approach, the medicalization ends up still being one of the main forms of intervention [14] [15] [16]. However, in relation to the pharmacological treatment of female sexual dysfunctions, the researchers are not yet final results until [17] [18]. The reasons are complex, but probably include the fact that a satisfying female sexual response be less about physical issues and more related to interpersonal and motivational variables [19] [20] [21] [22].

2. Methods

It was conducted as a non placebo-controlled, longitudinal and prospective clinical trial including women treated in a public health clinic in sexuality during the period from 2015 to 1019.

During the study period, 340 consultations were initiated at the HCPA sexual-

ity clinic. Inclusion criteria for the last analysis of the study were: women above 18 years with sexual dysfunction (FSFI index ≥ 26.5), who completed the proposed interventions and attended at least 2 consultations (Figure 1).

The participants answered a structured questionnaire about sociodemographic data and the FSFI-19 in the bouth meetinge, with and additional attributed note of 0 to 10 for their sexual satisfaction in each query (numerical scale of sexual satisfaction). According to the sexual history and dysfunction was diagnosed, proposed a therapeutic approach. The main therapeutic techniques adopted in the outpatient clinic are sexual education, treatment for genital atrophy, improvement of intimacy and communication of couple communication, demystification of negative beliefs and taboos, stimulus to self-eroticism and evaluation of the use of medications or comorbidities that could interfere with the sexuality. The visits were conducted by the outpatient care team composed by students of the course of medicine of last year, teachers and residents of Gynecology and Obstetrics Service of HCPA, university hospital of the Faculty of Medicine of UFRGS.

The research was approved by the research ethics committee of HCPA/plataforma Brasil CAEE 54947716.6.0000.5327 and women were invited to participate and provided written informed consent.

3. Statistical Analysis

Regarding data processing, the insertion and revision of the database were performed using the SPSS version 18.0. [SPSS Inc. Released in 2009. PASW statistics for Windows, version 18.0. Chicago: SPSS Inc.]. Quantitative variables were expressed as mean and standard deviation (± SD) or median (md) and interquartile range (percentiles 25 to 75), [P25 - P75]), defined by the Shapiro-Wilk normality test. Qualitative variables were described by absolute (n) and relative (n%) frequencies and compared between the groups of data with the chi-square with adjusted residual analysis (χ^2). Paired analysis considering the pre- and post-treatment periods were performed using the Wilcoxon or McNemar-Browker test, when applicable. The Spearman ρ coefficients (r_S) were estimated to determine correlations between de variables of interest. The level of

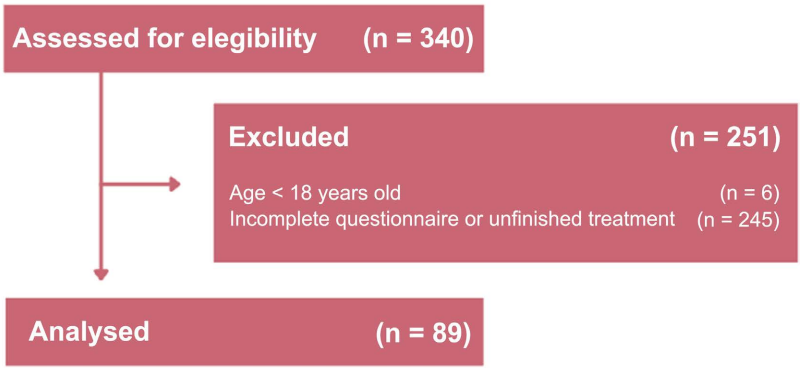


Figure 1. Example of a figure caption (figure caption).

significance adopted for all analysis was established at 5%.

For all sample size calculations, the program WinPEPI (Programs for Epidemiologists for Windows) version 11.63 was used. For the analysis of the effects of treatments (paired analysis) on the main complaints of female sexual dysfunction (e.g. anorgasmia, arousal and loss of sexual interest), the calculations were performed as described by McCabe, 2011. For anorgasmia (odds ratio = 31, correspondence factor = 2.74, lower percentage of yes = 11.11, and 20% of losses) 19 pairs of observations (38 observations in total, pre + post) were required, excitement (odds ratio = 11, correspondence = 22.27, lower percentage of yes = 14.82, and 20% of losses) 61 pairs of observations (122 observations in total, pre + post) were required and for loss of sexual interest (chance ratio = 15, correspondence factor = 18.67, lower percentage of yes = 53.70, and 20% of losses) 41 pairs of observations were required (82 observations in total, pre + post).

4. Results

Eighty-nine women were analyzed, with a median age of 45.00 years and 60.7% were classified as pre and/or perimenopause. Most participants (41.6%) did not complete elementary school. About 95.5% of women live with a partner and the median minimum relationship time is 1 year and the maximum is 57 years. The use of previous medications was reported by 50 (56.2%) women, with 40.4% for antidepressants. The main complaints for referral for follow-up at the sexuality clinic were hypoactive sexual desire dysfunction (67.4%) and pain related to sexual function (46.1%) (Table 1).

The median [P25 - P75] follow-up time of these participants at the Sexuality Outpatient Clinic was 12.00 [5.00 - 24.00] months, with 5.00 [3.00 - 8.00] median [P25 - P75] number of consultations. By characterizing the interventions performed, most of the procedures performed involved general orientations (86.5%), topical estrogen (56.2%), autofocusing (37.1%) and demystification (34.8%).

Finally, there was a positive relationship between the participant's sexual satisfaction score and the total FSFI-19 score in the pre-intervention period (Spearman correlation, $r_S = 0.214$, $p = 0.044$) and in the post-intervention period (Spearman correlation, $r_S = 0.358$, $p = 0.0001$) (Table 2).

The analysis of the FSFI-19 scores in the pre-treatment and post-treatment are described for each question. Overall, all FSFI-19 items had better post-intervention rates (McNemar-Browker Test, $p \leq 0.005$). The medians [P25 - P75] of the total FSFI-19 scores, as well as the frequency of adequate female sexual function, were higher after the interventions (Wilcoxon test, $p \leq 0.0001$ and McNemar-Browker test, $p = 0.012$, respectively). In addition, the median [P25 - P75] of the score given by the participant on their sexual satisfaction was higher at the post-intervention time compared to the pre-intervention period (Wilcoxon test, $p \leq 0.0001$) (Table 2). Considering the domains of the FSFI-19, the medians [P25 - P75] of desire, arousal, lubrication, orgasm, pleasure and pain were higher

Table 1. Characterization of the sample.

Variables	Total (n = 89)	
Age (in years) md {P25 - P75]	(minimum - maximum)	45.00 - 51.00 [36.00] (18.00 - 73.00)
Schooling n (n%)	<8 years 8 - 11 years >11 anos	37 (41.6) 46 (51.5) 6 (6.7)
Lives with partner n (n%)	No Yes	4 (4.5) 85 (95.5)
Time of relationship (years) md [P25 - P75]	(minimum - maximum) NOI - n (n%)	19.00 - 25.00 [5.00] (1.00 - 57.00) 4 (4.5)
Age of partner (a) Mean ± SD	(minimum - maximum) NOI - n (n%)	46.07 ± 12.23 (19.00 - 73.00) 4 (4.5)
Menopause n (n%)	No Yes	54 (60.7) 35 (39.3)
Chronic Diseases n (n%)	No Yes	36 (40.4) 53 (59.6)
Psychiatric Diseases n (n%)	No Yes	53 (59.6) 36 (40.4)
Reason for referral for follow-up n (n%)	Dysfunction of Desire Dysfunction of Orgasm Pain Dysfunction of excitement/Lubrication	60 (67.4) 13 (14.6) 41 (46.1) 2 (2.2)

Legend: n—absolute frequency. n%—relative frequency. [SD]—standard deviation. md—median. P25 - P75—interquartile range (percentiles 25th - 75th). NOI—not obtained information.

Table 2. Sexual function assessed with the female sexual function index (FSFI-19).

Variable FSFI-19	Pre-treatment (N = 89)	Post-treatment (N = 89)	*p-value
Total score FSFI-19 md [P25 - P75] (Minimum - Maximum)	48.00 - 60.00 [34.00] (3.00 - 94.00)	72.00 - 79.00 [63.00] (5.00 - 89.00)	≤0.0001
Sexual Dysfunction mn (n%) Yes No	12 (13.5) 7 (86.5)	3 (3.4) 86 (96.6)	0.012 [CFF2]
Score of sexual satisfaction md [P25 - P75] (Minimum - Maximum)	4.00 [2.00 - 6.00] (0.00 - 10.00)	8.00 [8.00 - 9.00] (4.00 - 10.00)	≤0.0001

Data described as absolute frequencies (n) and relative (n%) or median (md) and interquartile range (percentiles 25th - 75th, P25 - P75). Legend: p—index of statistical significance. *McNemar-Browker test or Wilcoxon test. Significance level set at 5% for all analysis.

in the post-intervention period in relation to the pre-intervention period (Wilcoxon test, $p \leq 0.0001$ for all analysis) (Table 3).

5. Discussion

Our results showed that women followed-up in the outpatient clinic of sexuality showed significant improvements in sexual function, as well as their sexual satisfaction perceived by them. It is noted that the sexual satisfaction score was positively related to the total score of the FSFI-19 and the medians of the scores obtained in the FSFI-19, as well as its subdomains, were higher in the post-treatment period.

Appropriate interpretation of the FSFI has the potential to strengthen the understanding of sexual function and thereby guide the development of treatments [23]. In the present study, an analysis of the FSFI as well as a clinical understanding of the causes of sexual dysfunction was crucial in making decisions in relation to the applied intervention.

With this, we reinforce that the fsfi-19 follows as an effective instrument for the assessment of sexual function in studies of human sexuality and the new version, with six questions, makes the application easier [24] [25] [26] [27]. A study comparing instruments of assessment of sexual satisfaction, highlighted the difficulty of being applied before the subjectivity regarding the definition of what is sexual satisfaction. In our study, we used a numerical scale of sexual satisfaction self-attributable to 0 - 10 that may be used as a simple and easy instrument for monitoring therapeutic approaches in sexual dysfunction. However, as described by Mark, K.P. (2013), further studies are needed to establish this effectiveness.

To characterize ours interventions, the majority of the procedures involved general guidelines on sexual education, treatment for genital atrophy, techniques

Table 3. FSFI-19 domain scores pre- and post-interventions.

Variables	Pre-intervention (n = 89)	Post-intervention (n = 89)	P-value
Desire md [P25 - P75] (Minimum - Maximum)	2.40 [1.20 - 3.60] (1.20 -6.00)	4.20 [3.60 - 4.80] (1.20 - 6.00)	≤0.0001
Excitement md [P25 - P75] (Minimum - Maximum)	2.40 [1.80 - 3.60] (0.00 -6.00)	4.20 [3.60 - 4.80] (0.00 - 6.00)	≤0.0001
Lubrication md [P25 - P75] (Minimum - Maximum)	3.00 [1.80 - 4.50] (0.00 - 6.00)	4.80 [3.90 - 5.70] (0.00 - 6.00)	≤0.0001
Orgasm md [P25 - P75] (Minimum - Maximum)	2.40 [1.60 - 4.00] (0.00 - 6.00)	4.80 [3.60 - 5.60] (0.00 - 6.00)	≤0.0001
Satisfaction—md [P25 - P75] (Minimum - Maximum)	3.20 [2.00 - 4.40] (0.40 - 6.00)	5.20 [4.40 - 5.60] (0.80 - 6.00)	≤0.0001
Pain md [P25 - P75] (Minimum - Maximum)	3.20 [1.60 - 4.80] (0.00 - 6.00)	4.40 [2.80 - 5.60] (0.00 - 6.00)	≤0.0001

Data described as median (md) and interquartile range (percentiles 25th - 75th, P25 - P75). Legend: p—index of statistical significance. *Wilcoxon test. Significance level set at 5% for all analysis. [SD]—standard deviation.

and stimulus of autofocusing (e.g. sensory focus) and improvement of intimacy and communication of the couple exercises, muscular relaxation (e.g. Jacobson and Kegel exercises), demystification of negative beliefs and taboos, and evaluation of the use of medications or comorbidities that could interfere with sexuality. The use of hormone therapy in patients with complaints weather and without contraindications was also considered. The treatment of sexual dysfunction is multifactorial [28] and medicine alone does not bring good results. The variability of therapeutic approaches in the literature demonstrates the complexity of female sexual dysfunctions, necessitating algorithms that address all four areas of the female sexual dysfunctions [11] [20] [29] [30] [31]. The present study showed no influence between the therapeutic approaches the results on sexual function and satisfaction of participants. In addition, highlights the need to continue evaluating these approaches with new designs of studies.

It is worth remembering that, in the present study, general guidelines about sexuality were the most prevalent therapeutic approaches. They were educational issues about sexuality (anatomy, sexual response and perception of their own sexuality), which could represent a positive influence on the improvement of the participants, represented a confounding factor. The fact of a space to clarify doubts or unknown aspects about sexuality could be a starting point to a favorable therapeutic response. A recent systematic review showed that attention-based and relaxation interventions provided by technologies such as apps and websites can have a positive effect on participants' overall health (Mikolasek, M., 2017). In view of the new pandemic/post-pandemic reality, in which distance care has become essential in health care, technology can be an informational tool with low cost and easy access for the promotion and protection of women's sexual health [23].

Before the presented aspects, the authors highlight the need to continue evaluating these approaches with new designs of studies, although several factors acting together on sexuality make it difficult to choose a suitable design (taboos, difficulty in performing an objective assessment of sexuality, few professionals and clinics specialized in the subject, scarce approach to the sexual function in clinical practice, comorbidities and use of medications that interfere with sexuality). Future use of studies with a control group might be needed to elucidate these relationships.

The data obtained allow us to emphasize the importance of a structured sexual anamnesis and a finding suitable as a starting point for defining the best approach to treatment [32]. Identify predisposing factors (e.g. diseases and previous experiences), triggering (divorce, sexual experiences not satisfactory, etc.), supporters (e.g. anxiety in relation to the performance, guilt, taboos or inappropriate sexual stimulation), and contextual factors (e.g. serious financial problems, unemployment, etc.) are determinants in the diagnosis [33]. As in the study by Lumel, J.E. in the present study, a semi-structured questionnaire was used and all professionals involved were careful not to leave their opinions and

personal beliefs during the consultations.

Studies show that factors such as age, education, employment, parity, and being in a relationship showed no influence on sexual dysfunction. With the advancement of population studies throughout the world, the variety of risk factors also increases, and the need to correlate each risk factor with each field of sexual function can be decisive in the search of treatment strategies [12] [34]. Therefore, it is possible that risk factors are not universal. An American study showed that schooling was a protective factor for sexual dysfunction, while in China, young women with higher education were more likely to report sexual dysfunction [35] [36]. In our study, there was no significant influence regarding the level of education of participants and their spouses. As the age of the participants, it was obvious the relationship with the DS and its emotional impact, unlike other studies where menopausal women have an increased prevalence, but with less suffering, while young women had lower prevalence, but the suffering in the presence of DS was higher [37].

The arterial systemic hypertension can influence directly or indirectly on sexuality. Vascular problems, side effects of medications or psychological disorders associated reinforce this influence [38]. In the pathophysiology of sexual dysfunction nitric oxide and phosphodiesterase 5 plays an important role in the smooth muscle of the clitoris. In the same way that hypertension interferes in the musculature of the blood vessels, can interfere in the vascularization of the genital region by reducing the blood supply and consequently the vessel required to congestion of the excitation phase [39]. More than half of the participants of our study presented some comorbidity and among these, arterial systemic hypertension was the second most prevalent after depression. Randomized clinical trials are also present a percentage of up to 44% of hypertensive women presenting sexual dysfunction, but, in our study, the direct relationship between hypertension and sexual dysfunction has not been well established [15] [19] [39].

The depression was the comorbidity with higher prevalence in our study, conferring with the global statistics [20] [40]. Several studies highlight the negative influence of depression on sexuality [39]. The same way that hypertension, in the present study, depression did not influence the results on the sexual function. In this case, receiving information about such comorbidities was enough to understand and clarify doubts about its influence on sexuality.

In Brazil, the sexology is a recent field within the specialty of obstetrics and gynecology [41]. There is still a belief on the part of most clinicians that the treatment of sexual dysfunction is not of medical priority [42]. In contrast, our study showed that, regardless of the treatment proposed to the participants, the fact they are heard by medical professionals interfered in the improvement of their function and sexual satisfaction at the end of follow-up. It is therefore important to identify, diagnose and promote strategies of treatment and follow-up to the female sexual dysfunctions at the public health level in specific clinics for sexuality [43] [44].

Talking about sexual problems provides emotional relief and receive informa-

tion and guidelines on sexuality was decisive in improving the satisfaction and sexual function of the participants in our study. With this, we demonstrate the importance of receptivity to all health issues in an equivalent manner, including the sexual issues, and the scope of a treatment in specialized environment with conditions of multidisciplinary act in all triggering factors in sexual dysfunctions.

6. Conclusion

The therapeutic approach of sexual dysfunction in public services specialized in sexuality is crucial as part of the general health and improves the quality of life of women, in addition, provides health professionals with the opportunity to work undoing their own prejudices offering the academic community an adequate training in this area. Because of the diversity of factors that influence the sexuality, more studies with different designs are needed in search of effective treatments and comprehension.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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