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TESTING THE EFFECTIVENESS OF AN ONLINE CBT INTERVENTION WITH THE S-ONapp METHOD FOR BOTH PARTNERS TO REDUCE POSTPARTUM FEMALE SEXUAL DISORDERS

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Abstract

Objective: The research evaluates the effectiveness of an online CBT program through the S-ONapp method addressed to both partners in order to decrease female sexual problems and increase the sexual satisfaction of both partners in the postpartum period.

Method: In a randomized clinical trial, participants - women in the first 3 months postpartum with sexual problems revealed by FSFI scale scores - were randomly assigned to two groups: experimental group (CBT online intervention for both partners) and control group (intervention CBT online standard for women). For both groups, scores on the FSFI (female sexual disorder), NSSS-S (sexual satisfaction) scales for both partners, and DAS (couple satisfaction) scales for both partners are measured on pretest, posttest, and 6-month follow-up.

Expected results: Regarding the control group, we expect that in the experimental group there will be: 1) a lower level of postpartum sexual problems reported by women in the posttest; 2) a higher level of sexual satisfaction reported by women in the posttest; 3) a higher level of sexual satisfaction reported by partners in the posttest; 4) a higher level of couple satisfaction reported by women in the posttest; 5) a higher level of couple satisfaction reported by partners in the posttest. The results are maintained 6 months after the intervention.

Conclusions: An online CBT intervention program for both partners, based on a multidimensional approach to postpartum female sexual problems, is effective in improving the sexual life of both partners by increasing sexual satisfaction and couple satisfaction, with direct implications for the clinical field.

Keywords: female sexual disorders, postpartum, sexual satisfaction, CBT online S-ONapp interventions.

INTRODUCTION

One of the essential aspects of the human being is sexuality, sexual health contributing to the quality of life. Sexual problems have been studied for a long time, identifying risk factors, various categories of disorders, as well as appropriate treatment protocols. For women, sexuality disorders are outlined in: desire, arousal, orgasm and pain. There are quantitative and qualitative differences in these disorders when we talk about different periods of age (menopause) or special populations (women who have various diseases that have a significant influence on all dimensions of life,

including sexuality, women who have gone through abuse sexual).

A special category is regarding the sexual problems that occur in the postpartum period. Pregnancy and postpartum periods are marked by a series of major changes for women, changes that occur at multiple levels: physiological, psychological (cognitive, emotional), behavioral, socio-cultural (Soma-Pillay et al., 2016). From a physiological point of view, during pregnancy most body systems (endocrinological, neurological, cardiovascular, muscular, renal, digestive, respiratory, bone) undergo major changes, and those at the hormonal and neurological level have an impact especially on emotional and cognitive functioning of the mother. Emotionally, both pregnancy and the postpartum period are marked by anxiety, stress, ambivalent mood swings, fatigue, irritability, insomnia, changes in body image. In terms of behavioral and socio-cultural changes, the woman has to take on new roles and responsibilities, the usual old concerns are replaced by child-centered behaviors, which have an impact on the couple's relationship and social life.

This context of profound change and restructuring of the life to which the woman must adapt, inevitably influences sexual health, many women facing various types of sexual dysfunction in the postpartum period (Delgado-Pérez et al., 2022). Postpartum sexual problems include: loss or decrease in sexual desire, decreased frequency of sexual activity, difficulty achieving orgasm, decreased genital sensitivity and arousal, pain during intercourse, bleeding or irritation after intercourse (Gutzeit et al., 2020).

Diagnostic criteria

According to the American Psychiatric Association's (2013) Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5), female sexual dysfunctions are classified in: sexual desire or arousal disorder, orgasm disorder, genito-pelvic pain / penetration disorder. The diagnostic criteria according to DSM-5 will be presented below.

Criteria for diagnosing sexual desire or arousal disorder in women involve a lack or significant reduction in sexual desire / arousal, manifested by at least three of the following symptoms: 1) reduced or no interest in sexual activity; 2) reduction or absence of sexual or erotic thoughts and fantasies; 3) lack or reduction of sexual initiative or lack of receptivity to partner initiatives; 4) reduction or absence of sexual arousal or pleasure during sexual intercourse in approximately 75% -100% of cases, 5) reduction or absence of sexual desire or arousal in response to any internal sexual or erotic stimulus; 6) reduction or absence of genital sensations or erogenous zones during sexual intercourse in approximately 75% -100% of cases (Diagnostic and Statistical Manual of Mental Disorders 5th ed .; DSM-5; American Psychiatric Association, 2013).

The criteria for diagnosing orgasm disorder in women involve the presence of any of the following symptoms in all or almost all sexual acts: 1) marked delay of orgasm, very low frequency of orgasm or absence of orgasm; 2) very low intensity of orgasmic sensations (Diagnostic and Statistical Manual of Mental Disorders 5th ed .; DSM-5; American Psychiatric Association, 2013).

Criteria for diagnosing genito-pelvic pain / penetration disorder involve persistent or recurrent discomfort associated with one of the following: 1) vaginal penetration during intercourse; 2) intense vulvovaginal or pelvic pain during intercourse; 3) intense fear or anxiety related to the appearance of vulvo-vaginal or pelvic pain; 4) marked tension or contraction of the pelvic floor muscles during the attempt at vaginal penetration (Diagnostic and Statistical Manual of Mental Disorders 5th ed.; DSM-5; American Psychiatric Association, 2013).

For all the disorders mentioned, the following criteria are included in the diagnosis: the symptoms persist for a minimum of 6 months, cause significant clinical discomfort and are not better explained by any other mental disorder without a sexual component or by a consequence of a serious problem in the relationship or stressors and can not be attributed to the effects of substances, drugs

or other medical conditions. (Diagnostic and Statistical Manual of Mental Disorders 5th ed.; DSM-5; American Psychiatric Association, 2013)

Prevalence

From a medical point of view, after birth, a woman's sexual organs need about 6 weeks to return to the state before birth, but only 32% resume sexual activity between 6 and 8 weeks postpartum. Although most women resume their sexual life between 3 and 6 months postpartum (Matthies et al., 2019), however, only after 6 months postpartum, the frequency and sexual functioning are close to the situation before birth. Thus, many women report at least one sexual problem (Delgado-Pérez et al., 2022). The prevalence of sexual dysfunction is high in the postpartum period: 83% at 3 months postpartum, decreasing to 64% at 6 months postpartum, but below the antenatal value of 38% (Barrett et al., 2000)

To identify the prevalence of postpartum sexual dysfunction, many studies investigate physical issues such as: dyspareunia, decreased or missing vaginal lubrication, pain during or during intercourse, changes in the vagina, bleeding during intercourse, loss of sexual interest, difficulties in having an orgasm (Barrett et al., 2000; Gutzeit et al., 2020). Most studies of postpartum female sexual disorders focus on the resumption of sexual life, perineal pain and dyspareunia, and self-reported sexual problems. O'Malley et al. (2021) argues the need for a more holistic approach to the sexual problems faced by women in the postpartum period, including the emotional and social factors involved. Applying such an approach in research would bring new information about the prevalence of postpartum sexual problems.

Risk factors

A more complex approach to the factors that influence postpartum sexual dysfunction takes into account several dimensions: physical, social, psychological, relational (O'Malley et al., 2021). Among the physical factors that influence female sexuality in the postpartum period were studied: type of birth, normal or instrumentally assisted vaginal or cesarean delivery, perineal trauma, dyspareunia, breastfeeding (Abdool et al., 2009; Gutzeit et al., 2020). Emotional factors that play a role in the etiology of postpartum sexual problems are: postpartum depression, anxiety, distorted self-image (Delgado-Pérez et al., 2022; O'Malley et al., 2021). Social and relational factors include: responsibility and adaptation to the new role, social and practical support (O'Malley et al., 2021). Also involved are factors such as extreme fatigue, lifestyle changes, emotional connection with the child, a new vision of the concept of sexuality oriented towards emotional intimacy (Delgado-Pérez et al., 2022; O'Malley et al., 2021).

Abdool et al. (2009) reviews postpartum sexual disorders and associated risk factors. Genito-pelvic pain disorder is the most common in the postpartum period due to birth with perineal trauma, episiotomy, instrumental. In the first 3 months postpartum, dyspareunia was associated with vaginal birth and its presence before birth. At 6 months postpartum, however, dyspareunia was associated with breastfeeding and antenatal dyspareunia. Regarding sexual desire or arousal disorder, studies have shown a decrease in frequency and sexual desire in the postpartum period. Sexual interest improves over time, but other factors that change in the postpartum period are important: the mother's body image and mental health, marital relationship. Sexual arousal is influenced by fatigue, depression, distractions, sexual anxiety and negative expectations caused by dyspareunia. Orgasmic disorder is also affected by perinatal trauma at birth. Compared to the year before birth, more women reported pain at orgasm or difficulty reaching orgasm at 3 and 6 months postpartum.

Regarding the influence of postpartum depression, studies show that compared to women who do not suffer from depression, for those with postpartum depressive symptoms, they are less likely to resume sexual activity 6 months after birth and report sexual problems. (Abdool et al., 2009).

Interventions

Treatments for female sexual dysfunction fall into two categories: drug treatment and psychological interventions. In the case of psychological interventions, the most commonly used are CBT interventions that are characterized by identifying thoughts, emotions, and behaviors that interfere with sexual pleasure (Canadian Psychological Association, 2019).

Postnatal women use the Internet as a means of communication and information and use mobile applications for a variety of health issues, including sexuality (Westerhoff et al., 2019). Thus, with the help of online interventions, he avoids time-consuming face-to-face sessions, flexibly goes through the intervention modules, maintains his anonymity. CBT interventions delivered online have a number of advantages (lower cost than face-to-face therapies, easy and quick access to treatment, geographical and time flexibility, psychoeducation, stigma removal), proving to be just as effective as face-to-face treatments in the treatment of many disorders (Ashford et al., 2016), including sexual disorders, both for women and men (Delcea, 2019).

General objective and assumptions

In a qualitative study, Delgado-Pérez et al. (2022) identifies the strategies used by women in the first 6 months postpartum to adapt to physical, emotional, life changes that impact sexuality. Physical problems, such as pain, lack of lubrication, are addressed by using lubricants, using different positions and avoiding those that cause pain, controlling penetration and rhythm, oral sex, masturbation. Emotional problems characterized by mood swings, anxiety, low self-esteem, were addressed through strategies such as: social support from your partner or other mothers, good communication with your partner, personal time, exercise, accepting postpartum changes. Body image, the need to feel attractive and wanted by your partner, are common themes and women have used strategies such as exercise, attention and self-care. Routine changes, lack of time characteristic of the postpartum period were addressed by women through strategies such as: sharing household chores, planning moments of intimacy. Women also reported changes in sexual needs, with a shift from antenatal physical intimacy to emotional intimacy, characterized by seeking affection, closure, sensitivity, and partner care, touching, and caressing, but less of the sexual practices involving diversity of sexual positions and games (Delgado-Pérez et al., 2022).

Postpartum female sexual disorders negatively impact women's sexual satisfaction. Sexual satisfaction is a construct that makes a psychological assessment of all aspects of sex life. Sexual satisfaction is influenced by relationship engagement, intimacy, and frequency of sexual activity (Strizzi et al., 2016).

The postpartum period also involves many and varied changes for the partner, to which he must adapt. From a sexual point of view, women's sexual problems also have an inherent impact on their partners' sexual satisfaction. Studies have shown that in the first months after childbirth, there is a discrepancy between a woman and her partner regarding sexual desire, which is often accompanied by feelings of guilt and failure (O'Malley et al., 2021).

Last but not least, the quality of the couple's relationship is correlated with sexual problems. Couple problems negatively affect lubrication, sexual arousal and desire, orgasm, and reduce the frequency of sexual activity (Matthies et al., 2019). The characteristics of the couple's relationship, as well as the satisfaction in the couple are elements also involved in postpartum sexuality (Cappell et al., 2016).

Given the multidimensional etiology involved in postpartum sexual disorders and the recommendations of previous studies towards a holistic approach to them (Delgado-Pérez et al., 2022; O'Malley et al., 2021), we consider that an intervention involving all these dimensions: physical, emotional, social and relational, being focused on the particularities that women face in the postpartum period, is needed. For both mother and partner, it is necessary to understand and accept the changes that take place in the postpartum period in terms of sexuality, awareness of the discrepancies that occur postpartum in terms of sexual desire and sexual

needs, the importance of increasing couple satisfaction to solve sexual problems postpartum.

Overall objective: to evaluate the effectiveness of a type of online CBT intervention dedicated to both partners individually in order to reduce postpartum female sexual problems and increase sexual satisfaction.

Assumptions: Comparing a CBT online intervention for both partners with a standard online CBT intervention for women, we expect the following results:

1. A lower level of postpartum sexual problems reported by women in the posttest, which is maintained at 6 months after surgery
2. A higher level of sexual satisfaction reported by women in the posttest, which is maintained at 6 months after surgery
3. A higher level of sexual satisfaction reported by partners in the posttest, which is maintained at 6 months after the intervention
4. A higher level of couple satisfaction reported by women in the posttest, which is maintained at 6 months after the intervention
5. A higher level of couple satisfaction reported by partners in the posttest, which is maintained at 6 months after the intervention

METHOD

Design

The research proposes a randomized clinical trial. The independent variables manipulated are the type of intervention and the time at which the results are measured. The independent variable manipulated in the experiment is the type of intervention, in two ways: S-ONapp CBT online intervention for both partners (experimental group) and standard online CBT intervention for women (control group). The independent variable is the time at which the measurements are made: pretest, posttest and 6 months after the intervention (follow-up). Dependent variables are represented by: postpartum female sexual problems (H1), female couple satisfaction (H2), partner satisfaction of partners (H3), sexual satisfaction of women (H4), sexual satisfaction of partners (H5).

Participants

People who are eligible for this study are women over the age of 18, in the first 3 months postpartum, who have sexual dysfunction (score less than or equal to 26 on the FSFI scale), are in a heterosexual relationship, have a minimum level of education, so that they are able to follow online programs, have access to a computer and the Internet. The exclusion criteria are: following any other type of treatment for sexual dysfunction. Women whose partner refuses to participate in the study will not be included.

The power analysis using the G * Power program determined that in order to obtain an effect d = 0.2 with alpha = 0.05, beta = 0.8, 134 participants are needed, which means 67 participants for each experimental condition.

Measurement instruments

The Female Sexual Function Index scale, adapted in Romanian, is used to measure the level of female sexual disorders, which includes 6 dimensions: desire, arousal, lubrication, orgasm, satisfaction, pain / discomfort. Scores are between 2 and 36 and a score less than or equal to 26 indicates a sexual disorder (Derogatis et al., 2020).

New Sexual Satisfaction Scale - Short Form, adapted in Romanian, is used to measure the level of sexual satisfaction, which includes 2 sub-scales: self-centered (personal habits, perceptions, emotions) and partner-centered / sexual activity (emotional exchange with partner, sexual frequency). It can be administered regardless of gender or sexual orientation. A higher score indicates a higher level of sexual satisfaction. (Strizzi et al., 2016).

To measure the level of satisfaction in the couple, the Dyadic Adjustment Scale adapted in Romanian is used, which includes four dimensions: couple consensus, couple satisfaction, couple cohesion and emotional expression and can be administered to both partners and only one of them (Spanish, 1976).

Working procedure

Recruitment of participants is done through the offices of family doctors and gy-

Table 1. The structure and content of the intervention program

First meeting:	**motivation for treatment and proposal of objectives, roles, responsibilities, priorities, flexible time**
The second session:	**the psychoeducation of female and male disorders**
The third session:	**dealing with perceptual issues**
Fourth meeting:	**Social support**
Fifth meeting	**the couple's relationship**
Sixth session:	**sexual activity**

necologists, clinics, hospitals, social media. Patients are invited to complete the informed consent and FSFI. They also complete an additional questionnaire with demographics and other information to identify whether the patient is eligible from the perspective of the other inclusion and exclusion criteria.

Eligible patients with a score below 26 on FSFI are invited to participate in the study.

Selected participants are randomly assigned (1: 1 allocation rate) to one of two groups: the experimental group (CBT online intervention for both partners) and the control group (standard online CBT intervention for women). For both groups, participants and their partners complete the NSSS-S and DAS (Table 1).

The online CBT therapy program for both partners is accessed from the computer or mobile devices, individually by the two partners. The program contains 6 modules, which will be completed in 6 weeks. Each module ends with a questionnaire to assess the degree of understanding and assimilation of the information presented, along with a homework. The online program has built-in tools that make it easy and pleasant to navigate through the information, reminders to do homework, feedback immediately after completing the questionnaires and indications on which information needs to be returned. The information will be available in both text and audio, making it easier to navigate based on preference and availability.

After completing the intervention, in week 7, the participants complete the FSFI, NSSS-S and DAS scales, obtaining the posttest results. Also, after 6 months from the end of the intervention, the participants complete the FSFI, NSSS-S and DAS scales again, obtaining the follow-up results.

Expected results

For the verification of each hypothesis, a mixed 2x3 ANOVA is used, applied to the results FSFI, NSSS-S for women, NSSS-S for men, DAS for women, DAS for men, respectively. We expect the scores of the dependent variables to be significantly different between the groups depending on the time of measurement. To locate these significant differences, complementary statistical analyzes will be performed using the Tuckey HSD test. We expect that: a) the scores of the dependent variables will be significantly higher in the posttest in the case of the experimental group than in the case of the control group; b) the scores of the dependent variables will be significantly higher from posttest to follow-up in the case of the experimental group; c) the scores of the dependent variables will be significantly higher at follow-up in the case of the experimental group than those of the control group. Given the expected results, the study will provide empirical evidence to show that CBT intervention for both partners leads to a post-test reduction of female sexual problems, increased sexual and couple satisfaction of both partners in the postpartum period, which are maintained 6 months after the intervention.

CONCLUSIONS

Previous studies on interventions for female sexual disorders in the postpartum period have revealed several aspects that were the starting point for this research: a) online interventions eliminate time barriers, flexibility characteristic of the postpartum period; b) online CBT interventions are effective in treating female sexual problems; c) female sexual problems should be addressed

holistically; d) sexuality of the partners is also affected in the postpartum period.

The expected results of this research demonstrate the empirical evidence provided by previous studies on the need for a holistic approach to postpartum female sexual problems in order to reduce them. Thus, the intervention program also addressed the emotional, relational factors, factors related to the postpartum context through psychoeducation and therapy modules: issues related to postpartum changes and the effects of physical birth, postpartum female and male sexual needs and discrepancies, time management, improving couple communication, a woman's body image, postpartum depression (Delcea C., & Scaunaș A., 2022, Delcea C., 2020).

Regarding future research directions, we propose to study the effectiveness of the online CBT intervention for both partners on the prevention of postpartum sexual problems and on the improvement of sexual satisfaction in the first postpartum months.

The expected results have practical implications as they suggest the extension of intervention programs for female sexual disorders taking into account the particular aspects of the postpartum period, as well as the importance of including the partner in treatment.

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