

Anxiolytic Herbs and Naturopathic Treatment of Anxiety-Induced Female Sexual Dysfunction: A Case Report



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ABSTRACT

We report on successful treatment of female sexual dysfunction in a young (23-year-old) woman (she/her) with a combination of anxiolytic and stress-relieving natural health products (NHPs) together with patient education and lifestyle counselling. Presenting symptoms included decreased sexual desire and arousal, anorgasmia, dyspareunia, and vaginismus that had improved with pelvic physiotherapy prior to the onset of naturopathic treatment. Contributing factors in this case included a personal history of abuse and sexual trauma. Alongside counseling and patient education, NHPs initially included L-theanine, *Rhodiola rosea*, *Panax ginseng*, and vitamin D. Over approximately 4 months of treatment, the patient reported significant improvements in sexual desire, both physical and psychological arousal, and was able to achieve orgasm. This case report identifies the important role of mental health and stress in female sexual dysfunction and supports the use of natural anxiolytics to support sexual function, in particular in patients with a history of trauma.

Key Words Herbal medicine, female sexual interest/arousal disorder, anorgasmia, anxiety, mood disorders, rhodiola, L-theanine, counselling.

INTRODUCTION

Female sexual dysfunction (FSD) is a very common sexual health concern, affecting between 38% and 63% of women.¹ Although FSD is more common in (peri)menopause, a recent community-based study on women aged 18–39 found that approximately 50% of younger women reported sexually-related personal distress, and 1 in 5 experienced sexual dysfunction.² Female sexual dysfunction can affect various parts of the sexual response cycle and encompasses a variety of conditions characterized by loss of desire, decreased arousal, inability to reach orgasm, and dyspareunia.³ The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria for female sexual interest/arousal disorder (FSIAD) includes at least three of the following: absent/reduced interest in sexual activity, absent/reduced sexual/erotic thoughts or fantasies, no/reduced initiation of sexual activity, and typically unreceptive to a partner's attempts to initiate, absent/reduced sexual excitement/pleasure during sexual activity in almost all or all sexual encounters, absent/reduced sexual interest/arousal in response to any internal or external sexual/erotic cues, or absent/reduced genital or nongenital sensations during sexual activity in almost all or all sexual encounters.⁴ Despite the high prevalence, there are many gaps in the current evidence base and available treatment options. Social stigma around sexuality, specifically for women and people with vulvas, is a significant barrier preventing patients from talking about their concerns with

healthcare providers (HCPs). Other barriers include previous trauma, low awareness of sexual health conditions, misconceptions about known treatments, and fear about the response from HCPs.³ Challenges for HCPs include time constraints, lack of adequate training (i.e. sexual health, diagnostic tools, treatment options, etc.), costs/coverage, and policy issues.³

The etiology of FSD is multifactorial, with “hormonal, neurobiological, and psychosocial contributions,” including vasculogenic, psychogenic, and neurogenic causes, as well as pelvic floor issues.^{5,6} Female sexual dysfunction can coexist with various mental health conditions.⁷ Anxiety, in particular, has been linked to low sexual desire and arousal, and strongly linked to difficulties with orgasm and dyspareunia.⁸ Since at least 40% of people on anti-depressants, the first-line therapy for anxiety, develop some sort of sexual dysfunction; it can be difficult to identify whether the mood disorder or the medication is the precipitating factor in many cases of FSD.⁹

Pharmaceutical approaches to FSD include hormonal therapy, phosphodiesterase type-5 inhibitors, botulinum toxin A, and flibanserin.¹⁰ Psychotropic medications and topical options to increase vulvar blood circulation are second-line approaches.^{11,12} Non-pharmacological treatments include psychotherapy and counselling, couples therapy, sex therapy, relaxation techniques, support for improving body image, exposure therapy, self-performed vaginal penetration exercises, and pelvic floor rehabilitation.^{10,13}

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Case Presentation

This report describes the case of a 23-year-old woman experiencing sexual dysfunction who first presented to the clinic in September 2021. Her primary concerns were decreased sexual desire, as well as life-long dyspareunia, and anorgasmia. She also reported mild vaginal dryness which impacted her sexual experience due to pain. On a numerical rating scale (NRS) where 0 is none and 10 is most, she rated both sexual desire and arousal at 2 out of 10. While pelvic physiotherapy had significantly improved her dyspareunia, she reported pain during deep vaginal penetration which could occasionally be sustained post-sexual activity, rated as 8 out of 10 on the NRS.

Symptoms of FSD were associated with significant feelings of stress and guilt. She felt as though her anxiety was well-managed, ranging from 4 out of 10 to 8 out of 10 (10 = worst), though she reported feeling overwhelmed, irritable, and complained of racing thoughts. Her anxiety was associated with family-related challenges and work stress. She also noted difficulty falling and staying asleep, with low energy on waking.

Medical History, Medications, Natural Health Products

The patient reported experiencing anxiety and insomnia since childhood, with onset around 9 years old. Her medical doctor diagnosed her with generalized anxiety disorder (GAD) at 15 years old, after an abusive relationship, and initiated treatment with escitalopram, adding trazodone a year later.

From her first sexual encounters, she experienced pain during and after penetrative activities. In January 2020, after consulting several medical professionals, she was diagnosed with vaginismus causing dyspareunia, which markedly improved with pelvic physiotherapy. Treatments included diaphragmatic breathing, internal and external muscle release, dilators and at-home exercises. She was also seeing a sex therapist.

When she presented to the clinic, she reported taking 10 mg qd escitalopram and, rarely, 12.5 mg of trazodone, preferring to use melatonin (5 mg qd) for sleep promotion. She had a LNG-IUS (levonorgestrel-releasing intrauterine system) inserted in October 2018 for contraception, though she had previously used oral contraceptives, and she occasionally used self-prescribed cannabis edibles. Family history was significant for a variety of mental health conditions, including borderline personality disorder, anxiety, anorexia, and bipolar disorder.

Biopsychosocial Determinants of Health

The patient was living with her boyfriend, whom she described as extremely supportive. In late 2021, the patient supported her sister through a criminal trial, during which emotions related to her own history of abuse and sexual trauma resurfaced. She did not disclose any further information about this history.

She played hockey for stress relief, but at times it interfered with her sleep schedule. She also enjoyed running and weight training, both of which improved her mental health. She slept approximately 9 hours a night but described challenges falling asleep and

staying asleep. When stress was heightened, she would have up to 8 awakenings throughout the night. The patient was generally fully nourished, with counselling provided regarding adequate intake of protein and vitamin/mineral-rich foods. She reported regular menstrual cycles of 28–32 days.

When discussing her views about sex and her FSD, she expressed feeling guilty about her symptoms. She associated her FSD with her Catholic upbringing and the shame instilled in her about sex. She defined sex solely as receptive penile–vaginal intercourse but knew she should focus on other parts of the sexual experience for pleasure and stimulation. She also found it challenging to enjoy and stay focused during self-stimulation. She used the words “awkward,” “distracted,” and “not turned on” when referring to masturbation.

Diagnosis

A diagnosis of FSD was established based on a clinical history of lower sexual desire and arousal, dyspareunia, and anorgasmia, strongly associated with stress and anxiety, with medications playing an additional role. Several factors influenced her FSD: hypertonicity of the pelvic floor muscles, GAD, a history of abuse and sexual trauma, prior history of oral contraceptive use, as well as current experiences of stress. Potential confounders included the patient’s long-term use of an antidepressant. Escitalopram is a selective serotonin reuptake inhibitor (SSRI) that has been linked to significant sexual dysfunction impacting both sexual desire and arousal. SSRIs increase serotonin which can affect testosterone and dopamine levels; these play a role in sexual arousal and orgasm respectively.^{14,15}

No physical exams were completed as all appointments were virtual due to COVID-19 pandemic-related factors. The pelvic physiotherapist had noted hypertonic pelvic floor muscles. Previous Pap tests and abdominal/pelvic ultrasounds were unremarkable. Anemia, iron deficiency,¹⁶ B12 deficiency, thyroid dysfunction,^{17,18} and blood sugar dysregulation^{19,20} were ruled out as potential factors associated with her anxiety and FSD (see Table 1).⁶ Based on previous medical history, it was unlikely the patient was suffering from any neurogenic or vasculogenic conditions. Validated questionnaires were not completed at baseline due to timing constraints and student clinician oversight.

TABLE 1 Summary of serum laboratory testing, collection date: 2022/02/10

| Test | Result | Reference Range | Units |
|-----------------------|--------|-----------------|---------|
| TSH | 1.87 | 0.35–5.00 | mIU/L |
| Ferritin | 159 | 12–105 | ug/L |
| B12 | 456 | >220 | pmol/L |
| Hemoglobin | 135 | 110–147 g/L | g/L |
| RBC | 4.4 | 3.8–5.2 | 10E12/L |
| Hematocrit | 0.39 | 0.33–0.44 L/L | L/L |
| HbA1c | 4.8 | <6.0 | % |
| Fasting blood glucose | 4.9 | <6.1 | nmol/L |

TSH = thyroid stimulating hormone;

RBC = red blood cell;

HbA1c = Hemoglobin A1c.

Therapeutic Management

Anxiety and stress support formed the basis of the patient's treatment plan based on a diagnosis of stress and anxiety-induced FSD. A combination of NHPs, sex-focused counselling, and stress management was employed to address both GAD and FSD. Monitoring for potential adverse effects and potential drug-NHP interactions was ongoing (see Table 2).

Natural Health Products and Medications

L-theanine (100 mg prn/before sex up to 500 mg total qd), *Panax ginseng* (500 mg qd), and *Rhodiola rosea* (200 mg qd) were initiated at the first visit. On October 5, she reported feeling more relaxed during sex and that sex was more enjoyable. Vitamin D3 was added to the treatment plan, at a dosage of 5000 IU qd for

3 months to correct for possible deficiency. Although baseline serum testing was recommended, the patient opted to supplement without results due to the cost of lab tests.

Counselling, Sexual Education, and Sex-Specific Recommendations

During each visit, counselling was included as it has been shown to improve mean scores of sexual desire, arousal, and satisfaction.²¹ Patient education included the importance of relaxation during sexual activity, erogenous zones, vulvar and vaginal anatomy, and exploring different types of touch and sensations. Stress management tools included diaphragmatic breathing to help with both stress/anxiety and pelvic floor muscle relaxation, lavender essential oil (2 drops on her pillow before bed), mindfulness-based

TABLE 2 Summary of naturopathic treatments and patient-reported outcomes

| Date of Visit | Recommended NHPs/Drugs/Treatments | Lifestyle & Counselling Recommendations | Patient-Reported Outcomes |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| September 28, 2021 | <ul style="list-style-type: none"> – L-theanine, 100 mg prn – <i>Panax ginseng</i>, 500 mg qd – <i>Rhodiola rosea</i> Extract, 200 mg qd | <ul style="list-style-type: none"> – Increase non-sexual intimacy with partner – Diaphragmatic breathing 2-3 times daily – Increase water intake to 2 L qd | |
| October 5, 2021 | <ul style="list-style-type: none"> – Vitamin D3, 5000 IU qd | <ul style="list-style-type: none"> – Book (<i>Come as You Are</i>, Emily Nagoski Ph.D.) – Journaling – Sleep hygiene education | <ul style="list-style-type: none"> – Improvements in stress, sexual functioning, and enjoyment during sex |
| October 26, 2021 | <ul style="list-style-type: none"> – Discontinue <i>Panax ginseng</i> – Continue with other treatments as previously recommended | <ul style="list-style-type: none"> – Education about erogenous zones, self-pleasure / self-discovery, mindset around sex – Journaling | <ul style="list-style-type: none"> – Sexual arousal and desire significantly improved – Night sweats, which resolved after discontinuation of <i>Rhodiola</i> and <i>ginseng</i> |
| November 9, 2021 | <ul style="list-style-type: none"> – Discontinue <i>Rhodiola</i> during menses if experiencing night sweats | <ul style="list-style-type: none"> – General dietary guidelines (increasing vegetables, fibre, and healthy fat consumption) – Co-stimulation of multiple erogenous zones during partnered sex – Self-care strategies – Patient started counselling with sister | <ul style="list-style-type: none"> – Night sweats improved, except around menses – Continued improvement in sexual desire and initiation of sex – Increase in vaginal lubrication and sexual responses – Decreased reliance on melatonin |
| December 7, 2021 | | <ul style="list-style-type: none"> – Mindfulness-based strategies after work due to stress response – Referred to doctor to discuss tapering escitalopram | <ul style="list-style-type: none"> – Improved sexual arousal, satisfaction, and vaginal lubrication – Engaging in sex more frequently – Fluctuating anxiety due to work stressors |
| December 21, 2021 | <ul style="list-style-type: none"> – Multi-strain probiotic (50 billion colony forming units), 1 capsule qd | <ul style="list-style-type: none"> – Restarted pelvic floor exercises | <ul style="list-style-type: none"> – Dyspareunia present but improved – Continued improvement in desire and arousal |
| January 18, 2022 | <ul style="list-style-type: none"> – Fish oil (1330 mg EPA, 266 mg DHA per capsule), 2 capsules qd – Lavender essential oil to diffuse | <ul style="list-style-type: none"> – Acupressure: Heart 7, Kidney 3, Pericardium 6 | <ul style="list-style-type: none"> – Reported first orgasm (Jan 9, 2022) – Dyspareunia well-managed – Irritability since reducing escitalopram to 5 mg qd (Jan 11, 2022) – Anxiety heightened due to work and stress |
| February 8, 2022 | <ul style="list-style-type: none"> – Chamomile, lavender, and lemon balm tea, 1 cup qd | <ul style="list-style-type: none"> – Discussed reducing exposure to stressors | <ul style="list-style-type: none"> – Dyspareunia, sexual desire and arousal remained improved – Anxiety continued to be heightened – Patient reported having low adherence to recommendations over the month of January |
| February 22, 2022 | <ul style="list-style-type: none"> – B-complex + L-theanine, 1 capsule bid | <ul style="list-style-type: none"> – Thought record completed during visit | <ul style="list-style-type: none"> – Anxiety managed well with more consistent use of recommendations |
| March 22, 2022 | <ul style="list-style-type: none"> – Reduced vitamin D3 to 2500 IU qd | <ul style="list-style-type: none"> – Pelvic floor massage based on guidance from pelvic physiotherapist (1/biweekly) | <ul style="list-style-type: none"> – Improved mood and anxiety – Consistent improvements with sexual arousal and desire – Continued ability to achieve orgasm |

NHP = natural health products; EPA = eicosapentaenoic acid; DHA = docosahexaenoic acid.

therapies (e.g., meditation, journaling),²² and scheduled time for self-care after engaging with family members or after a busy workday. Resources were provided, including the sexual temperament questionnaire (adapted and abbreviated from the Sexual Excitation/Sexual Inhibition Inventory for Women), touch exploration activity (to discover locations and types of touch she liked/disliked), and the book *Come as You Are* (Emily Nagoski, PhD). A water-based lubricant free of glycerin and fragrances²³ was recommended to help relieve pain during sex. Self-pleasure was recommended. She was also encouraged to increase the diversity of sexual activities beyond receptive penile–vaginal intercourse, and to engage in multiple-stimulatory sexual activities (e.g., both clitoral and penetrative stimulation).

Patient Outcomes and Treatment Plan Changes

On October 26, she rated her sexual desire at 6/10 and sexual arousal at 5/10, compared with 2/10 for both at her initial appointment. She also reported that she was rarely experiencing pain and was initiating sex more often. However, she also reported night sweats, which resolved when she discontinued the ginseng and rhodiola. Although there is no published literature or reported adverse effects of night sweats with either herb, both are considered Yang in nature from a traditional Chinese medicine (TCM) perspective. Upon consideration of a TCM pattern diagnosis, the patient fit the criteria for Heart Yin Deficiency: anxiety with sweating, palpitations, warm extremities, insomnia, night sweats, dry mouth and deep midline crack in her tongue. Differential diagnoses considered at this time included Liver Qi Stagnation, Heart Blood Deficiency, and Kidney Essence Deficiency. Heart Yin Deficiency could be one explanation for why these herbs may have caused night sweats when combined. It is also possible that a shift from non-ovulatory to ovulatory cycling precipitated premenstrual night sweats in this case. Since the patient felt her primary concerns were improved, it was recommended that she discontinue ginseng and monitor adverse effects from rhodiola alone.

At the following visit on November 9, the patient reported that the night sweats were much milder but worse before menstruation. Treatment was adjusted, and she was advised to discontinue rhodiola when approaching the start of her menstrual cycle, which was well-tolerated. She reported a sustained improvement in sexual desire (motivated to initiate sex) and arousal (noticed a significant increase in vaginal lubrication and tingling sensations during her sexual response). Stress management and sleep were also improved; she was no longer taking melatonin every night and awoke with more energy.

On December 7, she mentioned that she was enjoying sex more, especially during both clitoral (using a vibrator) and vaginal stimulation. She reported having sex more frequently and continued to notice more natural lubrication. Her sleep had also consistently improved, with only 1–2 nights of slightly prolonged sleep latency. At this visit, she mentioned her desire to taper off escitalopram. She disclosed having had difficulty trying to reduce her medication dose a few years earlier. Since she lived with her family at the time, she was confident that this process would be less challenging.

December 21, she rated her dyspareunia at 4/10 on the NRS, sexual desire at 6/10, and sexual arousal at 8/10. The patient experienced her first orgasm on January 9, 2022. After discussing with her medical doctor, she reduced her escitalopram to 5 mg on January 11, 2022.

During the appointment on January 18, she discussed feeling relieved that she was “capable” of achieving orgasm. Sexual desire and arousal continued to be improved. She rated her anxiety as 4/10 and noted an increase in irritability. A high EPA fish oil (1330 mg EPA, 266 mg DHA, 2 capsules qd) and lavender, chamomile, and lemon balm tea (1 cup qd) were introduced for additional mood support.

On February 8, she rated her anxiety as 3/10. She noted that her current process of tapering her medications had been much less challenging compared with the first time, which she attributed to a less anxiety-provoking living environment and the naturopathic interventions. At her last visit on February 22, 2022, she scored her sexual desire at 7/10, sexual arousal at 6–8/10, and dyspareunia at 5/10 on the NRS. At that time, she scored 10 on a GAD-7 questionnaire, placing her in the moderate anxiety category.

DISCUSSION

Female sexual dysfunction is a very prevalent condition for women and people with vulvas. Unfortunately, sexual health is an area of medicine that lacks research and relevant training. Many patients are uncomfortable disclosing sexual health concerns to their doctors, and healthcare providers often lack the training to assess and treat FSD.³ In naturopathic medicine, there is a focus on treating the root cause of patients’ health concerns and approaching cases from a holistic lens. In FSD, stress, anxiety and other mental-emotional concerns play an influential role. Since anxiety and psychotropic medications can contribute to sexual dysfunction in women and people with vulvas, naturopathic doctors have an opportunity to explore adjunctive anxiolytic treatments in their FSD patients to help support both their mental-emotional concerns and FSD.

There is limited research on specific naturopathic tools and NHPs for the management of FSD. Limited studies to date on L-arginine, ginseng, ginkgo, maca, and acupuncture have shown some improvements in different areas of sexual functioning.¹¹ There are small studies that show both an association between FSD and vitamin D deficiency²⁴ and others that support the use of Vitamin D supplementation to improve Female Sexual Functioning Index (FSFI) scores.²⁵ *Rhodiola rosea*, an herb traditionally used as an adaptogen to improve the body’s response to physical and mental stress, has been studied for its effectiveness in improving anxiety, cognition, and other mood symptoms.²⁶ Various studies have also shown positive effects of rhodiola on anxiety, including GAD.^{27,28} In female rat models, treatment with rhodiola had favourable effects on stress-related sexual dysfunction.²⁹ Current human research on rhodiola has been limited to its effects on premature ejaculation and erectile dysfunction.^{30,31} Ginseng has been shown to induce vasodilation and, therefore, increases blood flow to the genitals; however, current studies focus mainly on erectile

dysfunction.³² Other studies supporting the use of ginseng in FSD were predominantly in post-menopausal participants. Similar to rhodiola, however, ginseng has research to support its use with individuals who have high stress and anxiety.^{33,34} L-theanine also has research to support its use in reducing anxiety, depression, stress-related symptoms, and sleep challenges.³⁵ Since the presenting case was strongly associated with anxiety, treatment choices were primarily focused on addressing the mental-emotional aspect of the case.

LIMITATIONS AND FUTURE RESEARCH

It is difficult to identify which, if any, treatments specifically contributed to improvement due to the whole-systems, multidimensional approach to care. Rather than relying primarily on a simple numerical rating scale, it would have been beneficial to use validated questionnaires (i.e., Female Sexual Functioning Index, Female Sexual Distress Scale-Desire/Arousal/Orgasm (FSDS-DAO) PRO measure, GAD-7) more consistently to ensure accuracy and credibility. From a hormonal perspective, it may have been useful to assess serum estrogen, testosterone, and progesterone, as they can modulate sexual desire and arousal.³⁶ Although serum hormone levels were not assessed in this case, the existence of regular (presumably ovulatory) cycles suggested a healthy level of estrogen and progesterone. The patient also reported mild vaginal dryness, which could have been explored through both physical exams and blood work. Future patient cases may benefit from the consideration of TCM pattern diagnosis at the outset to improve selection of herbal therapeutic choices to avoid potential adverse effects such as night sweats.

In terms of research, many current papers focus on post-menopause, with limited insight into diagnosing and treating sexual dysfunction in those who are premenopausal. The current evidence base also lacks insight into people with vulvas who are a part of the 2SLGBTQIA+ community, or other intersecting socio-cultural factors (i.e., religion, disability, race/ethnicity, etc.) that may impact experiences of sexual dysfunction. Investigating the impacts and barriers faced by these communities would be extremely valuable. Future research should focus on conducting more high-quality systems-based or whole-treatment research, including psychotherapy, sex education, lifestyle counselling, and NHPs for the treatment of FSD. These studies will help to expand our current line of treatment and strategies used to manage FSD.

Treatment Cost

Based on a local store, cost of treatment is approximately: \$38 (L-theanine, 120 tablets), \$33 (rhodiola, 60 capsules), \$33 (fish oil, 120 softgels), \$27 (vitamin D3, 500 softgels), \$40 (Probiotics, 30 capsules), \$5 (chamomile, lavender, lemon balm, 16 tea bags). In addition, the book *Come As You Are* is about \$25. Considering that she is going to be managing her anxiety for the foreseeable future, which in turn affects her FSD, working to consolidate the interventions used will help to manage long-term costs. Based on the patient's goals, she has noted that the treatments used have been extremely helpful and she is currently not looking to change

her treatment plan. This is especially important as she tapers off of her antidepressant medication for her anxiety. Once we find additional lifestyle tools to help manage her anxiety, reducing some of these treatments will be possible. This patient, in particular, did not have significant financial barriers to her care. It is important, however, to note that treatments for chronic conditions can be associated with a significant financial burden. The risk of managing anxiety with no form of medication or NHP needs to be considered with patients undergoing these treatments.

CONCLUSION

This case report demonstrates an association between sexual distress, anxiety, and FSD and potential naturopathic approaches to care. Within approximately 4 months of treatment using predominantly stress and anxiety-focused treatments, the patient was able to significantly improve sexual desire and sexual arousal and to achieve orgasm. This case highlights the importance for HCPs to use treatments that target the underlying cause of FSD and consider various cultural, educational, and practical barriers impacting sexual healthcare delivery. Through educating patients, training HCPs, expanding medical research, and creating open spaces to discuss sexual health, we will be able to foster a more effective approach to sexual dysfunction in women and people with vulvas.

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CONFLICTS OF INTEREST DISCLOSURE

We have read and understood the *CAND Journal's* policy on conflicts of interest and declare that we have none.

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