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June 3, 2024

Oregon Medical Marijuana Program
OREGON HEALTH AUTHORITY
Public Health Division
Mailed to: Oregon Medical Marijuana Program
P.O. Box 14450
Portland, OR 97293

Dear Oregon Medical Marijuana Program,

I am pleased to present to you a request/petition to add **Female Orgasm Difficulty/Disorder (FOD)** as a condition of treatment with medical cannabis. In follow up to an email I received from the Oregon Medical Marijuana Program on January, 29, 2024, I included the following in this request/petition as outlined in OAR 333-008-0090:

1. This is the letter submitted with the request
2. The description of the disease, its characteristics, including the International Classification of Diseases (ICD code) or specific diagnosis described in the latest published edition of the Diagnostic and Statistical Manual of Mental Disorders can be found in **ATTACHMENT 1** under the following sections:
    a. Proposed Medical Condition
    b. Symptoms of the Medical Condition and/or Treatments
    c. Extent to which FOD causes Severe Suffering/Impairs Women's Quality of Life
    d. No Availability of Conventional Medical Therapies
3. General explanation of why medical marijuana would mitigate the symptoms or effects of the disease or condition – can be found in **ATTACHMENT 1** under section, Proposed Benefits from Medical Cannabis and **SUPPLEMENT 1,** excerpts of studies that showed efficacy of cannabis helping women orgasm and increasing orgasm frequency, ease, and satisfaction.
4. One peer-reviewed published scientific study showing the efficacy in humans for use of medical marijuana for the symptoms – can be found in **SUPPLEMENT 2 and 2A,** with several media articles discussing the scientific research in **SUPPLEMENT 3.**
5. You may also send letters of support from physicians or other licensed health care professionals knowledgeable about the disease or condition. Letters of support from medical doctors and professionals recommending FOD as a condition of treatment with medical cannabis can be found in **SUPPLEMENT 4.**

I worked with the Female Orgasm Research Institute (FORI), a 501c3 non-profit organization and the Women's Cannabis Project, a part of FORI, that advocates for public policy changes to state medical cannabis programs to add FOD as a condition of treatment with medical cannabis to prepare this petition/request.

I look forward to working with you and am available for any questions.

Sincerely,

Rebecca Andersson

Attachment 1
Petition To Add Female Orgasm Difficulty (FOD) As A Condition of Treatment for Medical Cannabis State of Oregon Medical Cannabis Program

Date: June 3, 2024

Petitioner: Rebecca Andersson
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PROPOSED MEDICAL CONDITION

This petition is specific to proposing **Female Orgasm Difficulty (FOD)**, referred to in this petition as FOD as a condition of treatment for medical cannabis. ICD-11 and DSM-5 name, code, definition, and description below.

ICD-11 name and code - Orgasmic Dysfunctions - HA02

Definition: Orgasmic dysfunctions refer to difficulties related to the subjective experience of orgasm. Anorgasmia refers to women who have never been able to have an orgasm.

Description: The pattern of absence, delay, or diminished frequency or intensity of orgasm occurs despite adequate sexual stimulation, including the desire for sexual activity and orgasm, has occurred episodically or persistently over a period of at least several months and is associated with clinically significant distress (World Health Organization, n.d).

DSM-5 name and code - Female Orgasmic Disorder - 302.73 F52

Orgasmic dysfunctions in women is referred to in the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) as Female Orgasmic Disorder, with sub-types including Lifelong FOD, Acquired FOD, and Situational FOD (APA, 2013).

Other terms used in research: Female Orgasm Difficulty

Definition: The term female orgasm difficulty is also used in research meaning women who have difficulties related to the subjective experience of orgasm (Moura et al., 2020; Laumann et al., 2005; Hevesi et al., 2019; Hevesi et al., 2020; Kinsey Institute, n.d.;).

SYMPTOMS OF THE MEDICAL CONDITION AND/OR TREATMENTS

Prevalence of FOD:

- FOD is one of the most prevalent sexual dysfunctions in women (Laumann et al., 2009).
- Up to 41% of women worldwide have FOD (Laumann et al., 2005).
- The percentage of women suffering from FOD has not changed for 50 years (Kontula & Miettinen, 2016).

- Orgasmic absence or difficulty, with or without distress is a common occurrence (Marchand, 2020).

Treatments for FOD:

- There are no conventional medications to treat FOD (Conn & Hodges, 2023).
- There is only one empirically validated treatment for FOD, directed masturbation (LoPiccolo & Lobitz, 1975), developed more than 50 years ago, and this treatment is only for women who have never had an orgasm (Heiman & Meston, 1997).
- There are no empirically validated treatments for the majority of women who have FOD (Heiman & Meston, 1997; Krans, 2018), these are women who have Situational FOD, meaning they orgasm in some situations but not others, such as during masturbation but not during partnered sex (APA, 2013).
- A recent review found no new validated treatments for decades and the need for validated treatments (Marchand, 2020).

EXTENT TO WHICH FOD CAUSES SEVERE SUFFERING AND IMPAIRS A WOMAN'S QUALITY OF LIFE

- FOD is a serious public health concern that impairs the quality of women's lives (Laumann et al.,1999).
- Women who report FOD experience high rates of mental health diagnoses (Basson & Gilks, 2018), prescription drug use (Buffum, 1986), anxiety (Meston et al., 2004), post-traumatic stress disorder (Yehuda et al., 2015) and sexual abuse histories (Najman et al., 2005).
- Impairment of mental health is the most important risk factor for women with FOD and other sexual dysfunctions (Basson & Gilks, 2018).
- Women with FOD reported 24% more mental health issues, 52.6% more post-traumatic stress disorder (PTSD), 29% more depressive disorders, 13% more anxiety disorders, and 22% more prescription drug use than women without FOD (Mulvehill & Tishler, 2024).
- Premenopausal women who have Type 1 diabetes are three times more likely to experience FOD and other sexual dysfunctions (Iapoce, 2023).
- The pooled prevalence of FOD and other sexual dysfunctions among women with heart failure was 56% (Schaffer & Regina, 2023).
- FOD is the number one sexual complaint among sexual abuse survivors (Kinzl et al., 1995).
- Women with FOD are more likely to experience relationship stress (McCabe, & Connaughton, 2016).
- Orgasm is an important component of sexual satisfaction (Laan & Rellini, 2011) and is a sexual and human right (World Association for Sexual Health, 2008, 2014).

NO AVAILABILITY OF CONVENTIONAL MEDICAL THERAPIES

- There are no conventional medications that treat FOD (Conn & Hodges, 2023), which may contribute to why the persistently high percentage of women suffering from FOD has not changed in 50 years (Kontula & Miettinen, 2016).

- Directed Masturbation, developed in the 1970s, is the only empirically validated treatment for FOD and ONLY for women who have never orgasmed in their lives (Heiman & Meston, 1997), which is about 10-15% of women (U.S. National Library of Medicine).

- *There are no empirically validated treatments for the highest percentage of women who have FOD*, and that is women who have Situational FOD - meaning they can orgasm in some situations such as masturbation, but not in others like during partnered sex (Heiman & Meston, 1997; Krans, 2018).

- There are almost no psychological treatments for sexual dysfunctions that conform to all of the creteria of "well-established treatments" (Heiman & Meston, 1997).

- Marchand (2020) stated in her research paper titled, Psychological and Behavioral Treatment of Female Orgasmic Disorder, "While existing research provides a solid foundation of knowledge, *treatment of FOD has seen little innovation since the 1980s.*"

- Pelvic floor muscle training was found to help women with secondary anorgasmia (Ricetto et al., 2010), in this research secondary anorgasmia defined women who did not experience orgasmic sensation during sexual intercourse and used to in the past.

- Marchand (2020) found that psychological treatment has been shown to be effective in helping women with FOD to gain or regain the ability to have orgasms, with higher success rates overall of treating Lifelong FOD, which is affects 10-15% of women who have FOD (Spector, 2023).

PROPOSED BENEFITS FROM MEDICAL CANNABIS

- For more than 50 years, cannabis has been consistently found in research to help women orgasm, help women orgasm who have FOD, and improve the frequency, ease, intensity, and/or satisfaction of orgasm (Goode, 1969,1970, 1972; Dawley et al., 1979; Halikas et al., 1982; Kasman et al., 2020; Koff, 1974; Lewis, 1970; Lynn et al., 2019; Moser et al., 2023; Mulvehill & Tishler, 2024; Smith et al., 2010; Sun & Eisenberg, 2017; Tart, 1971; Wiebe & Just, 2018; Weller & Halikas, 1982).

- Excerpts of studies from 1970-2024 are attached IN **SUPPLEMENT 1** that reflect the proposed benefits of cannabis as a treatment for FOD. It is important to note that no studies excluded women with FOD, one study controlled for the high percentage of women with FOD (Halikas & Weller, 1982) and one study dichotomized women with and without FOD (Mulvehill & Tishler, 2024). Highlights of three recent peer-reviewed studies are below:

- Among participants who experienced challenges in achieving orgasm, 72.8% (n = 147, P < . 001) reported that cannabis use before partnered sex increased orgasm frequency, 67% stated that it improved orgasm satisfaction (n = 136, P < . 001), and 71% indicated that cannabis use made orgasm easier (n = 143, P < . 001) (Mulvehill & Tishler, 2024).

- Women who reported cannabis use before sexual activity had 2.13 higher odds of reporting satisfactory orgasms. Furthermore, orgasm satisfaction was the only statistically significant domain of the five domains of sexual functioning for those who use cannabis before sexual activity. Cannabis appears to improve satisfaction with orgasm. (Lynn et al., 2019).

- Female sexual dysfunction, including orgasm dysfunction, declined by as much as 21% for each "step up" of cannabis use (Kasman et al., 2020).

- Journal articles that reveal cannabis helps women orgasm can be found in **SUPPLEMENT 2,** with one additional study that was published on May 7th, presented in **SUPPLEMENT 2A.**

- News articles and media about cannabis helping women orgasm can be found in **SUPPLEMENT 3.**
- Letters of support from medical doctors, medical professionals, and personal testimony can be found in **SUPPLEMENT 4.**

- Studies show that THC, the most well-known ingredient in cannabis, significantly reduces rates of anxiety, reduces traumatic memories related to trauma and PTSD by reducing activity in the amygdala (Raymundi et al., 2020) and reduces cognitive distractions by inhibiting activity in the prefrontal cortex (Baggio et al., 2020). Cognitive distractions are one of the main inhibitors to female orgasm (Dove & Wiederman, 2000).

- FOD's well known co-morbid conditions of anxiety (Meston et al., 2004) and PTSD (Yehuda et al., 2015) have been approved as conditions of treatment ifor medical cannabis in several US states.

- THC creates an altered state of consciousness (Sayin, 2012) whereas higher sexual responsiveness is related to altered states of consciousness (Costa et al., 2016). Women's orgasm is considered an altered state of consciousness (Dubray et al., 2017; Sayin, 2011).

DOSAGE

* Dosage was first mentioned as an important criterion for experiencing cannabis' sexual enhancements when Dr. Erich Goode pioneered the first cannabis and sex study in 1969 (Goode, 1969).

* Several studies that found cannabis inhibited orgasm, did not evaluate dosage, an important criterion for experiencing cannabis' sexual benefits (Johnson et al., 2004; Palamar et al., 2016).

* Gorzalka et al. (2010), stated, "The influence of cannabis intake on sexual behavior and arousability appear to be dose-dependent in both men and women, although women are far more consistent in reporting facilitatory effects."

CANNABIS RECOMMENDED AS A CONDITION OF TREATMENT FOR FOD

- The Illinois Medical Cannabis Board was the first US state to approve adding FOD as a condition of treatment with medical cannabis on March 11, 2024 (Adlin, 2024).

CANNABIS RECOMMENDED BY RESEARCHERS, THERAPISTS AND MEDICAL DOCTORS TO TREAT FOD

* Cannabis has been suggested as a sexual medicine to treat FOD and other sexual disorders for decades (Dawley et al., 1979; Moser et al., 2023; Mulvehill & Tishler, 2024).

* California-based sexologist Diane Urman and certified sex therapist Seth Prosterman, have been recommending cannabis to clients who have trouble orgasming since 2017 (Yagoda, 2017).

* Massachusetts-based cannabis specialist and Harvard-trained doctor, Dr. Jordan Tishler, CEO of inhaleMD, Inc., prescribes cannabis to women who have FOD (inhaleMD, 2017).

* Dr. Becky Lynn specializes in gynecology and has one of the few practices in the country which includes cannabis therapeutics to address sexual dysfunction. (Malanca, 2022).

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SUPPLEMENT 1

Proposed Benefits of Cannabis as a Treatment for FOD

Summary/Excerpt	Citation
Cannabis is statistically significant in influencing the ability to orgasm ($p < .05$) and influencing the ability to have more than one orgasm ($p < .05$). Medical implications of this study include the possible use of cannabis for treating sexual dysfunctions, especially within women.	Moser, A., Ballard, S. M., Jensen, J., & Averett, P. (2023). The influence of cannabis on sexual functioning and satisfaction. *Journal of Cannabis Research*, *5*(1). https://doi.org/10.1186/s42238-022-00169-2
For women with orgasm difficulty/disorder (FOD) cannabis use before partnered sex was associated with increased orgasm frequency (72.8%, n =147/202, $p < .001$), improved orgasm satisfaction (67% n = 136/202, $p < .001$) or improved orgasm ease (71%, n = 132/202, $p < .001$).	Mulvehill, S., & Tishler, J. (2024). Assessment of the effect of cannabis use before partnered sex on women with and without orgasm difficulty. *Sexual Medicine*, *12*(2). https://doi.org/10.1093/sexmed/qfae023
Improvement in female orgasm was statistically significant ($p = .0002$) for women who used cannabis. Increased frequency of marijuana use was associated with improved sexual function among female users, whereas chemovar type, method of consumption, and reason for use did not impact outcomes. For each step up of cannabis use intensity (ie. times per week), the odds of reporting female sexual dysfunction	Kasman, A. M., Bhambhvani, H. P., Wilson-King, G., & Eisenberg, M. L. (2020). Assessment of the association of cannabis on female sexual function with the female sexual function index. *Sexual Medicine*, *8*(4), 699-708. https://doi.org/10.1016/j.esxm.2020.06.009

declined by 21%.	
Women who reported marijuana use before sexual activity had 2.13 higher odds of reporting satisfactory orgasms (adjusted odds ratio ¼ 2.13; 95% CI ¼ 1.05, 4.35) than women who reported no marijuana use.	Lynn, B. K., López, J. D., Miller, C., Thompson, J., & Campian, E. C. (2019). The relationship between marijuana use prior to sex and sexual function in women. *Sexual Medicine*, 7(2), 192–197. https://doi.org/10.1016/j.esxm.2019.01.003
Increased ability to orgasm was reported by 44% of participants (n=86/195). Of the participants who reported difficulty reaching orgasm, 50% said it was easier to reach orgasm while using cannabis.	Wiebe, E., & Just, A. (2019). How Cannabis Alters Sexual Experience: A Survey of Men and Women. *The Journal of Sexual Medicine*, 16(11), 1758–1762. https://doi.org/10.1016/j.jsxm.2019.07.023
Participants commonly reported increased sensitivity on marijuana. These changes in sensation appear to have influenced length and intensity of sex as well as orgasm.	Palamar, J. J., Acosta, P., Ompad, D. C., & Friedman, S. R. (2016). A qualitative investigation comparing psychosocial and physical sexual experiences related to alcohol and marijuana use among adults. *Archives of Sexual Behavior*, 47(3), 757–770. https://doi.org/10.1007/s10508-016-0782-7
The positive effect of moderate cannabis consumption on female sexuality includes two areas: sexual desire and sexual functioning, the latter including sexual satisfaction, pleasure and orgasmic quality.	Gorzalka, B. B., Hill, M. N., Chang, S. C. (2010). Male–female differences in the effects of cannabinoids on sexual behavior and gonadal hormone function. Hormones and Behavior, 58(1), 91–99. https://doi.org/10.1016/j.yhbeh.2009.08.009
Frequent cannabis use was associated with difficulties in men, ability to reach orgasm as desired, but not women. In the association between frequency of cannabis use and sexual problems for men and women, inability to	Smith, A. M. A., Ferris, J. A., Simpson, J. M., Shelley, J., Pitts, M. K., & Richters, J. (2010). Cannabis Use and Sexual Health. *The Journal of Sexual Medicine*, 7(2), 787–793. doi:10.1111/j.1743-6109.2009.01453.x

reach orgasm was not statistically significant for women (p = .0770), while it was statistically significant for men (p - .011). Reached orgasm too quickly was statistically significant for men (p = .012), but was not statistically significant for women (p = .653) (Table 5, p. 791).	
Forty-three percent (43%) (*n* = 16/37) of women reported an increase in the number of orgasms experienced when using cannabis before sex. (Table 2, p. 190). The quality of orgasm was statistically significant in women (*p* = .025) with 86% reporting and increased quality of orgasm (n=32/37) (Weller & Halikas, 1984).	Weller, R. A., & Halikas, J. A. (1984). Marijuana use and sexual behavior. *The Journal of Sex Research,* 20(2), 186–193. https://doi.org/10.1080/00224498409551216
About 60% of the orgasmic females would be reporting enhanced quality of orgasm, controlling for as many as one third of women never or only occasionally experiencing orgasm.	Halikas, J., Weller, R., & Morse, C. (1982). Effects of regular marijuana use on sexual performance. *Journal of Psychoactive Drugs, 14*(1–2), 59–70. https://www.doi.org/10.1080/02791072.1982.10471911
The highest percentages of positive responses pertain to increased pleasure, sexual sensations, and intensity of orgasms as well as increasing variety of sexual experiences. The implication is that there may be value in researching the use of cannabis in treatment of sexual disorders.	Dawley, H. H., Baxter, A. S., Winstead, D. K., & Gay, J. R. (1979). An attitude survey of the effects of marijuana on sexual enjoyment. *Journal of Clinical Psychology*, 35(1), 212–217. https://www.doi.org/10.1002/1097-4679(197901)35:13.0.co;2-k
As cannabis use increases, there is an increase in sexual	Fisher, G., & Steckler, A. (1974). Psychological effects, personality and behavioral changes attributed

pleasure. Daily users report the highest increase in sexual pleasure.	to Marihuana use. *International Journal of the Addictions, 9*(1), 101–126. https://doi.org/10.3109/10826087409046773
The effect of cannabis seems more noticeable during orgasm, there appeared to be more sensation in the genital organs.	Koff, W. (1974). Marijuana and sexual activity. *Journal of Sex Research, 10*(3), 194–204. https://doi.org/10.1080/00224497409550850
Our survey revealed cases of situationally nonorgasmic females following marijuana use.* There were also cases of multiorgasm (from two different women who both stated that they never had more than one orgasm when engaged in intercourse while not under the influence of marijuana.) It seems conceivable that marijuana, with suitable psychological and sociological conditions, and taken in a light to moderate dose releases inhibitions.	Koff, W. (1974). Marijuana and sexual activity. *Journal of Sex Research, 10*(3), 194–204. https://doi.org/10.1080/00224497409550850
"The orgasm is more intense than usual," was one of eight reasons offered by cannabis smokers as explanations of why using cannabis renders the sexual experience more pleasurable and exciting.	Goode, E. (1972). Sex and marijuana. *Sexual Behavior, 2*, p. 48.
Relevant characteristic effects of using cannabis before sex included new, pleasurable qualities to orgasm (p. 289). The majority of users indicated that marijuana greatly enhances sexual pleasure.	Tart, C. T. (1971). On being stoned: a psychological study of marijuana intoxication. essay, Science and Behavior Books, Palo Alto, CA.
Four of the women who talked with me said that they had "learned" to have their first orgasm while they were	Lewis, B. (1970). *The sexual power of marijuana.* Wyden.

on (cannabis) and then were able to achieve orgasm straight (without cannabis).	
Becoming high smoking marijuana is similar in many respects to the attainment of sexual orgasm, at least for women. An overwhelming 68% replied that marijuana increased their sexual enjoyment, that their orgasmic pleasure was heightened by the drug.	Goode, E. (1970). *The marijuana smokers.* Basic Books.
Eighty-four (84%) percent of the subjects engaged in sexual activity when using cannabis. It was apparent from the analysis on sexual activity that marijuana has a sensual effect on the subjects. They were more aware of their bodily functions and sensual pleasures. This is true of male and female, long and short-term users, both moderate and heavy smokers.	Haines, L., & Green, W. (1970). Marijuana use patterns. The British Journal of Addiction to Alcohol and Other Drugs, 65(4), 347–362. https://doi.org/10.1111/j.1360-0443.1970.tb03954.x

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Ejaculatory and Orgasmic Disorders

Assessment of the effect of cannabis use before partnered sex on women with and without orgasm difficulty

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Abstract

Background: Up to 41% of women face challenges achieving orgasm, a statistic unchanged for 50 years.
Aim: To evaluate the effect of cannabis use before partnered sex on women with and without difficulty achieving orgasm.
Methods: This observational study evaluated responses from female study participants relating to their demographics, sexual activities, mental well-being, cannabis usage, and orgasm-related questions from the Female Sexual Function Index (FSFI).
Outcomes: Outcomes included orgasm frequency, difficulty, and satisfaction related to cannabis use or lack of use before partnered sex, largely based on the FSFI orgasm subscale.
Results: Of the 1037 survey responses, 410 were valid and complete. Twenty-three surveys (5.6% returned) were excluded due to failure to meet the study's criteria. Of the valid surveys, most women (52%, n = 202) reported difficulty achieving orgasm during sexual activity with a partner. These women were primarily between 25 and 34 years of age (45%, n = 91); 75% identified their race as White (n = 152/202); 52% (n = 105) identified as LGBTQI+ (lesbian, gay, bisexual, transgender, queer/questioning, intersex, or other); and 82% (n = 165) were married or in a relationship. Among participants who experienced challenges in achieving orgasm, 72.8% (n = 147, $P < .001$) reported that cannabis use before partnered sex increased orgasm frequency, 67% stated that it improved orgasm satisfaction (n = 136, $P < .001$), and 71% indicated that cannabis use made orgasm easier (n = 143, $P < .001$). The frequency of cannabis use before partnered sex correlated with increased orgasm frequency for women who experienced difficulties achieving orgasm (n = 202, $P < .001$). The reasons for cannabis use before partnered sex resulted in a more positive orgasm response (n = 202, $P = .22$).
Clinical Implications: Cannabis may be a treatment for women with difficulty achieving orgasm during partnered sex.
Strengths and Limitations: The researchers examined the challenge of achieving orgasm and considered the covariates reported in the literature, including the FSFI orgasm subscale. The findings may not be generalizable to women who rarely or never use cannabis before sex, women who have never experienced an orgasm, or women who do not have female genitalia. Additionally, the specific type of cannabis used, its chemical composition, the quantity used, and whether or not the partner used cannabis were not assessed in this study.
Conclusion: Cannabis-related treatment appears to provide benefit to women who have female orgasm difficulties or dysfunction.

Keywords: female orgasmic dysfunction; female orgasmic disorder; orgasmic dysfunction; female orgasm difficulty; female sexual dysfunction; cannabis and sex; cannabis and female orgasm.

Introduction

For nearly half a century, researchers have suggested the potential benefits of cannabis in treating female orgasmic dysfunction (FOD) and other sexual maladies.[1–4] Anecdotes and general sexuality research[4–7] suggest that cannabis could treat FOD. This formal investigation focuses on the influence of cannabis on FOD, including medical and recreational usage, regardless of chemical type, dosage, usage timing, and legal status.

FOD is a significant public health concern,[8,9] affecting up to 41% of women worldwide.[10] *ICD-11* classifies the condition as "orgasmic dysfunction." A paucity of treatments exists.[11,12]

Many studies suggest that cannabis can have positive effects on female orgasm,[1,2,5–7] such as enhancing intensity,[1,7,13–16] increasing frequency,[2,4,6,15,17] easing difficulty,[7,13] and improving quality.[2,6,13,15,17,18] Other studies reported possible cannabis inhibition on women's orgasms.[2,14,19] The dosage of cannabis appears to be important, as it exhibits a dose-dependent relationship to enhanced orgasm response.[2,5,20,21] When appropriately dosed, tetrahydrocannabinol (THC), the primary component of cannabis, can reduce anxiety,[22] potentially leading to improved orgasm and satisfaction during sexual encounters.[23] THC reduces activity in the amygdala and hippocampus, parts of the brain that store and react to trauma.[24] THC also inhibits neural activity in the prefrontal cortex,[25] central to high-level cognitive function, reflecting categories, rules, and cognitive control.[26] Does cannabis use before sex increase orgasm frequency, ease, or satisfaction in women who report orgasm difficulty?

Methods

In addressing factors related to FOD during partnered sex, we used the term *difficulty* instead of *dysfunction* to reduce negative connotations and allow participants to express their experiences more freely. Quantitative research based on a within-study design was used in this study to establish a

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cause-and-effect relationship and to test the hypothesis that cannabis helps women orgasm who have FOD. The study's survey questions on FOD aligned with the *ICD-11* as "etiological considerations associated with relationship factors" when defining orgasmic dysfunction.[27]

Participants

We invited sexually active women who used cannabis to complete an anonymous uncompensated 41-question survey via Qualtrics software (Supplement 1) distributed from March 24 until November 18, 2022. *Sexually active* was defined as having sex with a partner within the last 30 days, which may have included a range of sexual activities. As outlined in the approved institutional review board application, participants acknowledged informed consent before beginning the survey. News of the opportunity to participate in the study was posted and promoted through social media and postcards. Relevant ID is an assignment to each participant enabled in the survey to flag duplicate surveys.

Participant eligibility was limited to those who were at least 18 years of age who had used cannabis and were involved in partnered sex within the last 30 days. Exclusions included pregnant women, those breastfeeding, and those who had used other recreational substances during the past month. Participants with other sexual issues were not excluded and had an opportunity to elaborate on such issues in the survey. Other exclusions from the analysis included incomplete surveys, surveys that indicated no use of cannabis before sex, and those that failed to indicate if the respondent had female genitalia.

Measures

The FSFI[28] orgasm subscale evaluates orgasm frequency, ease, and satisfaction within the last 30 days, with each question having a slider scale of 5 choices. Orgasm frequency ranged from *almost always to always* to *almost never or never*, orgasm difficulty from *extremely difficult to impossible* to *not difficult*, and orgasm satisfaction from *very satisfied* to *very dissatisfied*. The same 3 questions and slider scale ranges were asked twice: *with cannabis* before partnered sex, followed by *without cannabis* before partnered sex.

The study evaluated demographic factors, relationship satisfaction, cannabis use behaviors, mental health diagnosis, prescription medication, sexual abuse history, and sexual behavior. Statistical tests provided analytic depth and breadth. Table 1 presents the demographic and clinical characteristics of the participants.

Analysis

Data analysis occurred between November 20, 2022, and March 27, 2023. The researchers received 1037 survey responses. Forty percent (n = 417) failed to meet the inclusion criteria, and 210 were excluded for being incomplete, leaving 410 completed surveys. In addition, 23 surveys indicated that participants never used cannabis before sex or did not clearly state their gender. Thus, 94% (N = 387) of completed surveys constituted the primary source of data analyzed.

The grouped responses in reporting *yes* or *no* to the question related to orgasm difficulty during partnered sex determined FOD. Upon evaluation, we moved the responses of 17 women to the category that best reflected their orgasm response without cannabis before partnered sex. For example, we moved a woman's *no* response to orgasm difficulty to the *yes* category if a respondent stated that she *almost never or never* orgasmed without cannabis before partnered sex. As a result of this objective dichotomization, 52% (n = 202) of the participants were characterized as having FOD.

The study examined 202 women with FOD and all women with and without FOD (N = 387). The study first examined the participants with FOD, and if a statistically significant relationship existed with the use of cannabis before partnered sex, the analysis then turned to all study participants. The only exception to this methodology was for primary intake method, sexual abuse history, and mental health diagnosis. The measurement of these factors was for all women in the study despite the lack of statistical significance found among women with FOD.

The statistical test used in each analysis was based on 2 factors—the level of measurement and the number of treatments—with 3 statistical tests used overall: McNemar, 1-factor analysis of variance (ANOVA), and 1-sample *t*-test. The McNemar test is a nonparametric statistical test for a before-and-after design where a person is one's own control; each has a control and a treatment response. The McNemar test evaluated the paired responses to the FSFI orgasm subscale regarding orgasm frequency, ease, and satisfaction with and without cannabis use before sex.

For orgasm frequency, responses indicating *almost always or always*, *most times*, *sometimes*, and a *few times* were combined to represent *yes* to orgasm, while *almost never or never* represented *no* to orgasm. Among women with FOD (n = 202), responses fell into 4 categories: orgasm with and without cannabis (n = 121), orgasm with cannabis and no orgasm without cannabis (n = 58), no orgasm with cannabis and orgasm without cannabis (n = 7), and no orgasm with or without cannabis (n = 16).

For orgasm difficulty, *extremely difficult or impossible*, *very difficult*, *difficult*, and *slightly difficult* were combined to represent the *difficult* category, while *not difficult* represented the *not difficult* category. Among women with FOD (n = 202), responses fell into 4 categories: difficult with or without cannabis (n = 123), difficult with cannabis and not difficult without cannabis (n = 1), not difficult with cannabis and difficult without cannabis (n = 70), and not difficult with or without cannabis (n = 8). Table 2 represents these data.

For orgasm satisfaction, *very satisfied*, *moderately satisfied*, and *about equally satisfied and dissatisfied* were combined to represent the *satisfied* category, while *moderately dissatisfied* and *very dissatisfied* were combined to represent the *dissatisfied* category. Among women with FOD (n = 202), responses fell into 4 categories: satisfied with or without cannabis (n = 157), satisfied with cannabis and dissatisfied without cannabis (n = 34), dissatisfied with cannabis and satisfied without cannabis (n = 3), and dissatisfied with or without cannabis (n = 8).

A 1-sample *t*-test or 1-factor ANOVA was used when the measurements were independent with different subjects in each of the groups. The FSFI orgasm subscale, demographics, sexual behavior, mental health, and cannabis use behavior were analyzed.

For orgasm frequency, 2 represented *almost always or always* and 6 *almost never or never*. Orgasm frequency responses were grouped by scores 2 to 5 as *yes orgasm* and 6 as *no orgasm* with and without cannabis before sex. The *no cannabis* orgasm frequency score was subtracted from

Table 1. Demographics, sexual behavior, mental health, sexual abuse history, cannabis use behavior, and cannabis effect on orgasm.

Characteristic	Women, No. (%)		*P* value: cannabis effect on orgasm based on variable	
	With orgasm difficulty	With + without orgasm difficulty	With orgasm difficulty	With + without orgasm difficulty
No.	202	387		
Demographics				
Age, y			.683	—[a]
18-24	43 (21.3)	76 (19.6)		
25-34	91 (45)	181 (46.8)		
35-44	42 (21)	83 (21.4)		
45-54	17 (8)	28 (7.2)		
55-64	3 (1)	11 (2.8)		
≥65	6 (3)	8 (2.1)		
Education			.704	—
Less than high school diploma or GED	4 (2)	6 (1.6)		
High school diploma or GED	15 (7)	22 (5.7)		
Some college	38 (19)	74 (19.1)		
Associate degree	16 (8)	34 (8.8)		
Bachelor degree	76 (30)	149 (38.5)		
Graduate degree	53 (26)	102 26.4)		
Ethnicity			.437	—
Asian	6 (3)	15 (3.9)		
Black/African American	10 (5)	22 (5.7)		
Hispanic	19 (9)	40 (10.3)		
Multiracial	6 (3)	15 (3.9)		
Native American	3 (1)	4 (0.8)		
Pacific Islander	1 (0)	1 (0.3)		
White/Caucasian	152 (75)	279 (72.1)		
Other	5 (2)	11 (2.8)		
Income, $			.235	—
<20 000	39 (19.3)	62 (16)		
20 000-34 999	24 (11.9)	54 (14)		
35 000-49 999	30 14.9)	54 (16)		
50 000-74 999	49 24.3)	94 24.3)		
75 000-99 999	27 13.4)	55 14.2)		
≥100 000	33 16.3)	68 17.6)		
Relationship status			.141	—
Single	24 (11.9)	45 (11.6)		
Married	67 (33.2)	127 (32.8)		
In a relationship	98 (48.5)	193 (49.9)		
Divorced	13 (5.4)	6 (1.6)		
Other	0	16 (4.1)		
Religion			.889	—
Buddhist	0 (0)	2 (.50)		
Christian (Catholic, Protestant, any denomination)	25 (12.4)	53 (13.7)		
Hindu	1 (.50)	1 (.30)		
Jewish	11 (5.4)	15 (3.9)		
Muslim	0 (0)	2 (.50)		
Sikh	1 (.50)	1 (.30)		
I do not practice a religion	152 (75.2)	296 (76.5)		
Other	12 (5.9)	17 (4.4)		
Sexual orientation: LGBTQI+			.898	—
Yes	105 (52)	192 (49.6)		
No	93 (46)	188 (48.6)		
Sexual behavior and relationship satisfaction				
Masturbation frequency			.620	—
≥1/d	16 (7.9)	31 (8.0)		
2-3/wk	77 (38.1)	136 (35.1)		
4-5/wk	16 (7.9)	33 (8.5)		
Few times per month	62 (45.5)	117 (30.2)		
Once every few months	19 (9.4)	45 (11.6)		
I do not masturbate	12 (.50)	25 (6.5)		
Sexual issues besides orgasm difficulty			—	—
Yes	47 (23.3)	75 (19.4)		
No	155 (76.7)	312 (80.6)		

(*Continued*)

Table 1. Continued

Characteristic	Women, No. (%)		*P* value: cannabis effect on orgasm based on variable	
	With orgasm difficulty	With + without orgasm difficulty	With orgasm difficulty	With + without orgasm difficulty
Partnered sex frequency			.541	.617
≥1/d	11 (5.4)	23 (5.9)		
2-3/wk	83 (41.1)	162 (41.9)		
4-5/wk	21 (10.4)	52 (13.4)		
Few times per month	79 (39.1)	139 (35.9)		
Once every few months	8 (4.0)	11 (2.8)		
Relationship satisfaction			.606	—
Very satisfied	100 (49.6)	221 (57.1)		
Moderately satisfied	59 (29.2)	103 (26.6)		
About equally satisfied and dissatisfied	22 (10.9)	32 (8.3)		
Somewhat dissatisfied	15 (7.4)	19 (4.9)		
Very dissatisfied	3 (1.5)	4 (1.0)		
I am not in a partnered relationship	3 (1.5)	8 (2.1)		
Sexual relationship status			.629	—
In a sexual relationship with 1 person <10 y	121 (59.9)	226 (58.4)		
In a sexual relationship with 1 person >10 y	43 (21.3)	87 (22.5)		
Engaging in sex with >1 person	34 (16.8)	66 (17.1)		
Not in a sexual relationship with 1 person	4 (2.0)	8 (2.1)		
Mental health, prescription drug use, sexual abuse history				
Mental health diagnosis			.164	.004*
Yes	129 (63.9)	231 (59.7)		
No	73 (36.1)	156 (40.3)		
Mental health diagnosis type: ≥1 per person			—	—
ADHD	16 (7.9)	31 (8.0)		
Anxiety disorder	95 (47)	172 (44.4)		
Bipolar disorder	12 (5.9)	18 (4.7)		
Depressive disorder	86 (42.6)	147 (38.0)		
Obsessive compulsive disorder	5 (2.5)	8 (2.1)		
PTSD	40 (19.8)	64 (16.5)		
Other	13 (6.4)	24 (6.2)		
Prescription drug use			.232	.114
Yes	123 (60.9)	215 (55.6)		
No	79 (39.1)	172 (44.4)		
Sexual abuse history			.206	.003*
Yes	74 (36.6)	125 (32.3)		
No	128 (63.4)	262 (67.7)		
Cannabis use behavior				
Cannabis use frequency before sex			<.001‡	<.001*
Never	0 (0)	0 (0)		
Rarely	20 (9.9)	36 (7.4)		
Some of the time	59 (29.2)	122 (31.5)		
About half the time	36 (17.8)	70 (18.1)		
Most of the time	64 (31.7)	116 (30.0)		
Every time	23 (11.4)	43 (11.1)		
Length of time using cannabis before sex, y				
<1	40 ((19.8)	65 (16.8)	.797	—
1-3	71 (35.1)	144 (37.2)		
>3-5	30 (14.9)	55 (14.2)		
>5	60 (29.7)	122 (31.5)		
I do not use cannabis before partnered sex	1 (.50)	1 (.30)		
Primary intake method			.524	<.0001*
Smoking	100 (49.5)	183 (47.3)		
Vaping oil	33 (16.3)	66 (17.1)		
Vaporizing cannabis flower (weed)	12 (5.9)	26 (6.7)		
Edibles	48 23.8)	95 (24.5)		
Tincture	5 (2.5)	9 (2.3)		
Topicals	1 (.50)	1 (.30)		
Other	3 (1.5)	7 (1.8)		

(*Continued*)

Table 1. Continued

Characteristic	Women, No. (%)		*P* value: cannabis effect on orgasm based on variable	
	With orgasm difficulty	With + without orgasm difficulty	With orgasm difficulty	With + without orgasm difficulty
Primary reason for use			.022[a]	<.001*
Relaxation	127 (62.9)	233 (60.2)		
Sleep	11 (5.4)	33 (8.4)		
Sex	21 (10.4)	37 (9.6)		
Other medical problem	9 (4.5)	19 (4.9)		
Prescription	20 (9.9)	38 (9.8)		
Pain	14 (6.9)	27 (7.0)		

Abbreviations: ADHD, attention-deficit/hyperactivity disorder; LGBTQI+, lesbian, gay, bisexual, transgender, queer/questioning, intersex, or other; PTSD, posttraumatic stress disorder. [a]Dashes indicate that the larger group was not analyzed when the *P* value was not significant for women with orgasm difficulty, except for mental health, prescription drug use, sexual abuse history, and primary intake method *Statistically significant.

Table 2. Paired FSFI orgasm subscale questions with and without cannabis before sex.

Measure: how calculated	Cannabis used	No cannabis used		χ^2 (*P* value)[b]
Orgasm frequency: paired orgasm frequency response with and without cannabis before sex		Orgasm	No orgasm	
	Orgasm	121 (59.9)	58 (28.7)	38.5 (<.0001)*
	No orgasm	7 (3.5)	16 (7.0)	
Orgasm ease/difficulty: paired orgasm difficulty response with and without cannabis before sex		Difficult	Not difficult	
	Difficult	123 (60.9)	1 (0.5)	69.01 (<.0001)*
	Not difficult	70 (34.7)	8 (4.0)	
Orgasm satisfaction: paired orgasm satisfaction response with and without cannabis before sex		Satisfied	Dissatisfied	
	Satisfied	157 (77.7)	34 (16.8)	27.68 (<.0001)*
	Dissatisfied	3 (1.4)	8 (4.0)	

Abbreviation: FSFI, Female Sexual Function Index. [a]Data are presented as No. (%). [b]Results per McNemar test: women with female orgasmic dysfunction (n = 202; *df* = 1). *Statistically significant.

the *with cannabis* score for each participant and totaled. A 1-sample *t*-test was performed.

For orgasm difficulty, 2 represented *extremely difficult or impossible* and 6 *not difficult*. Orgasm difficulty responses were grouped by scores 2 to 5 as *difficult* and 6 as *not difficult*. The orgasm difficulty score without cannabis was subtracted from the score with cannabis. One-factor ANOVA was performed.

For orgasm satisfaction, 2 represented *very satisfied*, 4 *about equally satisfied/dissatisfied*, and 6 *very dissatisfied*. Orgasm satisfaction responses were grouped by scores 2 and 3 representing *satisfied*, 4 *about equally satisfied/dissatisfied*, and 5 and 6 *dissatisfied*. The orgasm satisfaction score without cannabis was subtracted from the score with cannabis. One-factor ANOVA was performed.

Demographic data, sexual behavior, mental health, sexual abuse history, and cannabis use behavior were tested with 1-factor ANOVA. The exception was race, which was computed with a 1-sample t-test. A score from 2 to 6 was given to each participant's orgasm frequency response with and without cannabis before sex, with 2 representing *almost always or always* and 6 *almost never*. The *no cannabis* score was subtracted from the *with cannabis* score for each participant and computed per the variable.

Results

Orgasm subscale of the FSFI

Of women with FOD (n = 202), 28.7% (n = 58) experienced orgasm with cannabis and no orgasm without cannabis ($\chi^2 = 38.5$, $P < .0001$, McNemar); 34.7% (n = 70) reported that it was not difficult to orgasm with cannabis and difficult to orgasm without cannabis ($\chi^2 = 69.01$, $P < .001$, McNemar); and 16.8% (n = 34) indicated that they were satisfied with cannabis and dissatisfied without cannabis ($\chi^2 = 27.68$, $P < .0001$, McNemar). Table 2 presents the data.

Orgasm frequency

Orgasm frequency increased 39.8% for women with FOD (n = 202), with 88.8% (n = 179) experiencing orgasm almost always, most times, sometimes, or a few times when using cannabis as compared with 63.3% (n = 128) without cannabis. Women with FOD who almost never or never orgasm decreased 68.9%, with 36.6% (n = 74) almost never or never experiencing orgasm without cannabis as compared with 11.4% (n = 23) with cannabis, Mean difference −1.50 with $t(201) = 14.68$ $P < .0001$ (1-sample t-test). Figure 1 presents the data. Comparative data revealing differences in women's orgasm frequency with and without FOD and with and without cannabis are presented in Figure 2.

Orgasm difficulty

Orgasm difficulty decreased 35.4%, with 61.4% of women with FOD (124/202) reporting that orgasm was slightly difficult, difficult, very difficult, or extremely difficult or impossible with cannabis as compared with 95.1% (n = 192) without cannabis. Women who indicated that it was extremely difficult or impossible decreased 67.4%, with 22.8% (n = 46) finding it extremely difficult or impossible with cannabis vs 7.4% (n = 15) without cannabis, $F(1, 200) = 36.37$, $P < .0001$ (1-factor ANOVA). Figure 3 presents the data.

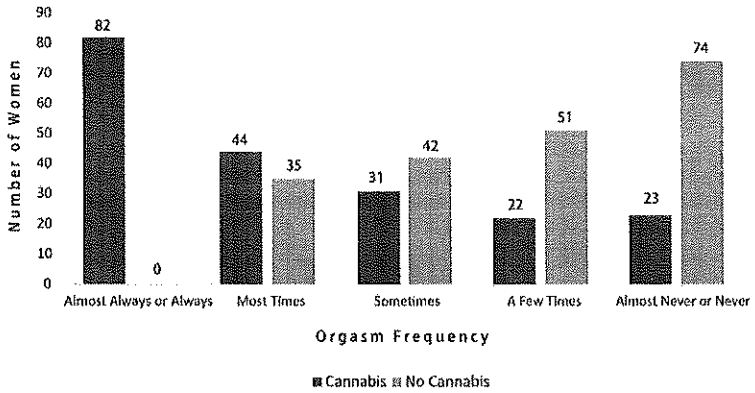

Figure 1. Measures for orgasm frequency during partnered sex for women with orgasm difficulty were fielded from March 23 to November 18, 2022, of women aged at least 18 years who reported orgasm frequency within the last 30 days with and without cannabis use before partnered sex. Orgasm frequency responses after cannabis and no cannabis were given a score from 2 (almost always) to 6 (almost never) for each participant. The difference of each score with cannabis and without cannabis was computed. If there is no cannabis effect, the mean of the scores should be zero. A negative score indicates a negative cannabis effect. The hypothesis that the mean of the differences was zero was tested per the 1-sample *t*-test. The mean difference was −1.50; $t(201) = -14.68$, $P < .0001$.

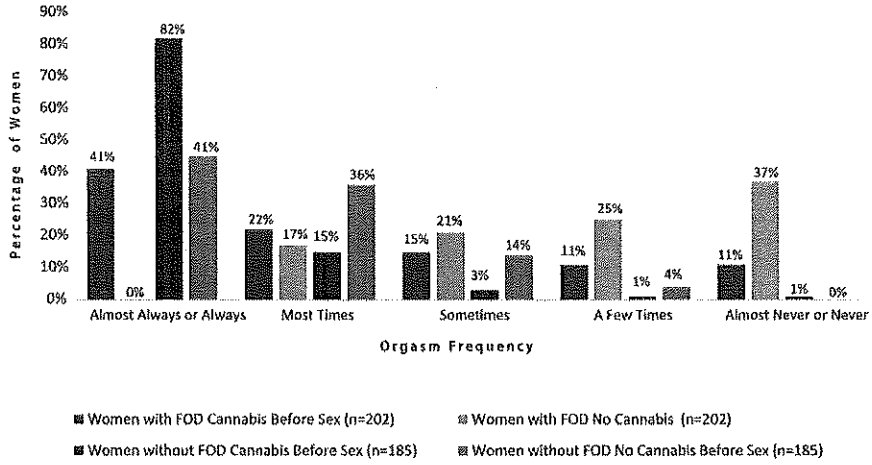

Figure 2. Measures for orgasm frequency during partnered sex for women with and without orgasm difficulty were fielded from March 23 to November 18, 2022, of women aged at least 18 years who reported orgasm frequency within the last 30 days with and without cannabis use before partnered sex. Respondents were asked, "Over the past month, when you USED cannabis BEFORE partnered sex, how often did you reach orgasm (climax)?" and "Over the past month, when you DID NOT USE cannabis BEFORE partnered sex, how often did you reach orgasm (climax)?" Possible responses included *almost always or always, most times (more than 1/2 of the time), sometimes (about 1/2 of the time), a few times,* and *almost never or never.* Comparative data are presented.

Orgasm satisfaction

Orgasm satisfaction increased 97.7%, with 86.1% of women with FOD (174/202) reporting that they were very satisfied, moderately satisfied, or about equally satisfied and dissatisfied with cannabis as compared with 43.6% (n = 88) without cannabis. Women who reported that they were moderately or very dissatisfied decreased 75.4%, with 56.4% (n = 114) being moderately or very dissatisfied without cannabis vs 20.8% (n = 28) with cannabis, $F(2, 199) = 61.88$, $P < .0001$ (1-factor ANOVA). Figure 4 presents the data.

Frequency of cannabis use and length of time using cannabis before sex

The frequency of cannabis use before sex increased orgasm frequency in women with FOD, $F(4, 197) = 5.13$, $P < .001$ (1-factor ANOVA). The largest group of women with FOD used cannabis most of the time (31.7%, 64/202). Those who responded *almost always* or *always* orgasmed 47% of the time. Table 1 presents the data.

The duration of a woman's history of using cannabis before sex was not statistically significant for women with FOD, $F(3, 197) = 0.34$, $P = .797$ (1-factor ANOVA). However, this result is relevant because women reported improved orgasm experiences regardless of how many months or years before sex they had used cannabis. The largest group of women (35%, 71/202) used cannabis before sex for 1 to 3 years.

Reasons for cannabis use and intake method

Cannabis reason for use was statistically significant in creating a more positive orgasm characterization for all respondents, $F(5, 381) = 5.81$, $P < .001$ (1-factor ANOVA) and particularly for women with FOD, $F(5, 196) = 2.71$, $P = .022$ (1-factor

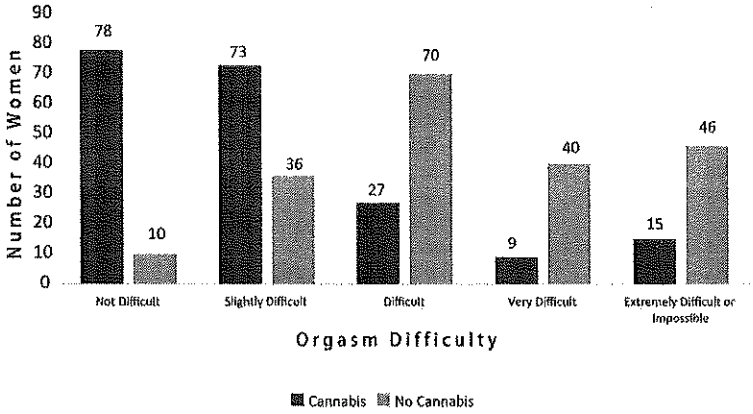

Figure 3. Measures for orgasm difficulty during partnered sex for women with orgasm difficulty were fielded from March 24 to November 18, 2022, of women who reported orgasm difficulty with and without cannabis use before partnered sex. Orgasm difficulty responses were given a score from 2 to 6, with *slightly difficult*, *difficult*, *very difficult*, and *extremely difficult* given a score of 2 to 5 and grouped as *difficult* and *not difficult* given a score of 6. A 1-factor analysis of variance was done to test the hypothesis of no differences among the means between the 2 categories tested. The result was $F(1, 200) = 36.37$, $P < .0001$.

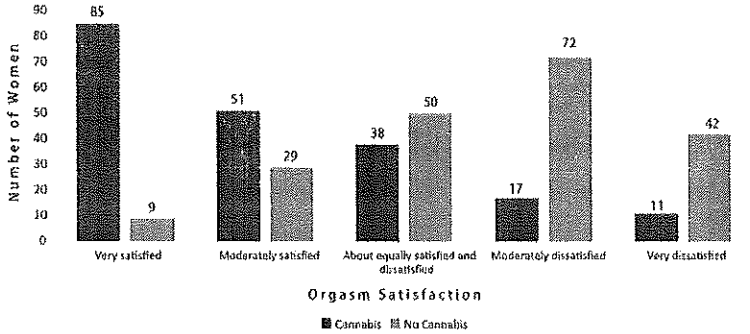

Figure 4. Orgasm satisfaction for women with orgasm difficulty with and without cannabis use before partnered sex. Measures for orgasm satisfaction during partnered sex for women with orgasm difficulty were fielded from March 24 to November 18, 2022, of women aged at least 18 years who reported orgasm satisfaction with and without cannabis use before partnered sex. Orgasm satisfaction responses were given a score from 2 to 6. Scores of 2 (very satisfied) and 3 (moderately satisfied) were combined into 1 category (satisfied; group 1); a score of 4 (about equally satisfied and dissatisfied) stayed the same (group 2); and scores of 5 (moderately dissatisfied) and 6 (very dissatisfied) were combined into 1 category (dissatisfied; group 3). The means are as follows: group 1, –2.0 (n = 136, SD = 1.2); group 2, 0.5 (n = 38, SD = 0.8); group 3, 0.1 (n = 28, SD = 0.7). A 1-factor analysis of variance was done to test the hypothesis of no differences among the means. The result was $F(2, 199) = 61.88$, $P < .0001$.

ANOVA). Survey participants selected from 5 categories when describing their orgasm experience: pain, relaxation, sleep, sex, and other medical problems, including the use of prescription medications. Of the women with FOD, 63% (127/202) reported using cannabis for relaxation.

Smoking was the foremost method of cannabis intake by all study participants (47.2%, 183/387). Among all women, this method of cannabis ingestion was significantly related to a more positive orgasm response, $F(4, 382) = 7.58$, $P < .0001$ (1-factor ANOVA). However, the same could not be said for women with FOD, $F(4, 197) = 0.80$, $P = .524$ (1-factor ANOVA).

FOD and other sexual issues

The majority of women who reported FOD (n = 202) during partnered sex claimed the ability to orgasm in some situations but not others (71%, n = 144), and 77% (n = 155) had no other sexual difficulties. Of the 23% who identified other sexual difficulties, pain during sex was the number 1 sexual complaint. Of women without FOD (n = 185), 85% (n = 157) cited no other sexual challenges. Of the remaining 15% (n = 28) who reported other sexual challenges, the majority (57%, n = 16) experienced low sexual desire.

Demographics, relationship status, and sexual behavior

When consumed before partnered sex, cannabis had no statistically significant relationship with age, race, income, education, religion, sexual orientation, sexual relationship status, relationship status, relationship satisfaction, sexual orientation, partnered sex frequency, or masturbation frequency. Among women with FOD (n = 202), women aged 25 to 34 years (45%), in a relationship (not married; 48.5%, 98/202), holding a bachelor degree (38%, 76/202), and earning between $50 000 and $75 999 (24%, 49/202) constituted the largest group.

The majority of women with FOD noted their sexual orientation as LGBTQI+ (lesbian, gay, bisexual, transgender, queer/questioning, intersex, or other (52%, n = 105) and their race as White (75%, n = 152), expressed being very satisfied in their partnered relationship (49.5%, n = 100) with 1 person

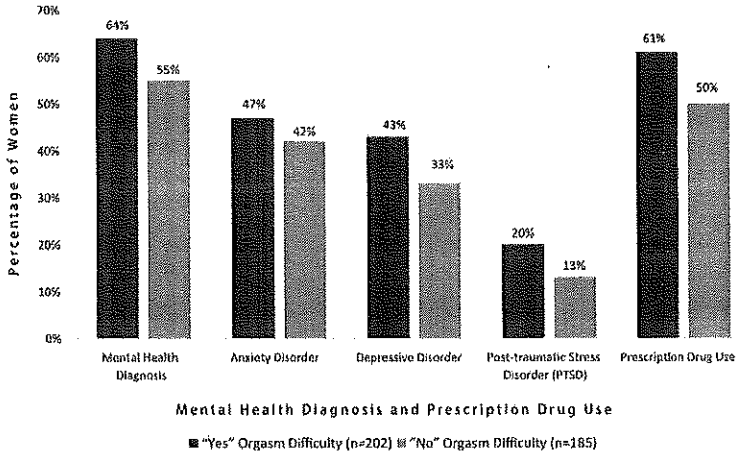

Figure 5. Measures for mental health diagnosis, diagnosis type, and prescription drug use for women who responded yes or no to orgasm difficulty were fielded from March 23 to November 18, 2022, of women aged at least 18 years who reported using cannabis before partnered sex. Respondents were asked, "Do you have a mental health diagnosis?" and if yes, respondents were asked the following question: "Please check your mental health diagnosis with the following options: anxiety disorder, depressive disorder, bipolar disorder, posttraumatic stress disorder, or other." Respondents were also asked, "Are you on any prescription medication?" (yes or no). Comparative raw data are presented.

<10 years (60%, n = 121), and indicated not practicing a religion (75%, n = 152).

Mental health and prescription medication

Statistically significant differences were found among all women who had a mental health diagnosis (231/387) regarding a more positive orgasm response when using cannabis before sex, N = 387, $F(1, 385) = 8.60$, $P = .004$ (1-factor ANOVA). Of the women with FOD (n = 202), 64% (n = 129) had a mental health diagnosis, and 61% (n = 123) took prescription medication. On average, women with FOD had 24% more mental health issues, 52.6% more cases of posttraumatic stress disorder (PTSD), 29% more depressive disorders, 13% more anxiety disorders, and 22% more prescription drug use than women without FOD. Figure 5 presents the data.

Sexual abuse history

A statistically high percentage (32.3%, 125/387) of women who had a history of sexual abuse, with or without FOD, reported experiencing a more positive orgasm response to cannabis before sexual activity, $F(1, 385) = 8.84$, $P = .003$ (1-factor ANOVA). Among women with FOD (n = 202), those with a history of sexual abuse (38.6%, n = 74) represented 32.9% more sexual abuse history than women without FOD (27.6%, 51/185). Figure 6 presents the data.

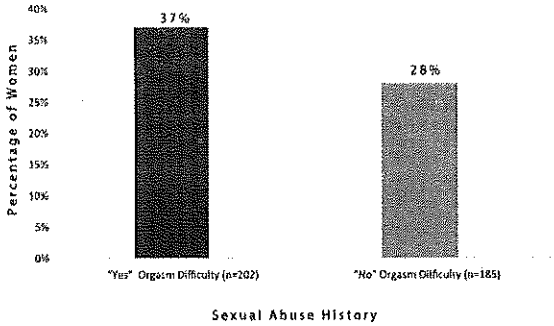

Figure 6. Measures for sexual abuse history for women who responded yes or no to orgasm difficulty were fielded from March 23 to November 18, 2022, of women aged at least 18 years who reported using cannabis before partnered sex. Respondents were asked, "Do you have a history of sexual abuse?" (yes or no). Comparative data are presented.

Discussion

The results corroborate 50 years of anecdotal and learned speculation about cannabis helping women with FOD. The research found that cannabis use increased orgasm frequency, eased orgasm difficulty, and improved orgasm satisfaction. At the same time, the results opened new areas of discussion.

Improved orgasm response for women with a mental health diagnosis

Women in this study with 1 or more mental health diagnoses who use cannabis before partnered sex have a more positive orgasm response regardless of whether they have FOD. These results are consistent with research finding that women with FOD experience high rates of mental health diagnoses,[8,29–32] prescription drug use,[33–35] or PTSD.[36–39] Women with anxiety disorders represented 44% (172/387) of women in this study. They were 3.5 times more likely to have FOD than nonanxious women.[40]

Cannabis use resulted in more orgasms for sexual abuse survivors

Sexual abuse survivors' number 1 sexual complaint is orgasm difficulty,[41] coupled with high rates of PTSD.[42,43] This study revealed that 33% more women with sexual abuse histories reported FOD than women without FOD. THC in cannabis reduces activity in the hippocampus and amygdala,[22,24] the parts of the brain that store and react to traumatic memories.[44,45] This activity may play a role in extinguishing traumatic memories[24] and result in a more positive orgasm response.

Cannabis and FOD treatment theories

Several theories explore why cannabis may be an effective treatment for FOD.[46] Dishabituation theory[46] proposes that cannabis lessens the routine of habits,[47] such as cognitive distraction, a known FOD cause,[48–53] and proposes that dishabituation may positively affect FOD.[46] Neuroplasticity theory proposes that some women learn to orgasm while using cannabis,[46] as seen in comments in this study and anecdotally.[13,54] Cannabis and endocannabinoids, the cannabinoids created by the human body, are increasingly recognized for their roles in neural development processes, including brain cell growth and neuroplasticity.[55]

Multimodal treatment theory proposes that women who use cannabis for any reason may lessen their FOD,[46] as noted by Kasman et al, who found that for each step up of cannabis use, female sexual dysfunction declined by 21%.[5] Amygdala reduction theory proposes that reduced amygdala activity can positively affect FOD.[46] Hypervigilance, anxiety, and PTSD are responses of the amygdala[45] and commonly impair sexual response.[38,56]

Limitations

This study may not be generalizable to women who rarely use or do not use cannabis before sex, women who have never had an orgasm, or women who do not have female genitalia. The cultivar of cannabis was not a focus of this study, nor was the chemotype or amount of cannabis used. The partner's use or nonuse was also not evaluated in the study.

Cannabis use before sex did not help all women

Cannabis use before sex did not help all women orgasm. Among survey respondents, 4% reported never having had an orgasm, even though they used cannabis before partnered sex.

Conclusions

This study's findings support 50 years of speculation and research suggesting cannabis as a treatment for FOD. Key results of improved orgasm frequency, ease, and satisfaction for women reporting FOD during partnered sex show the potential of cannabis becoming a recognized treatment.

Cannabis use before partnered sex appears valuable to women who use it to treat FOD. Indeed, women with FOD experienced improvement during partnered sex regardless of the time frame of cannabis use.

Future research should focus investigations on the potential of cannabis as a treatment option for women who have been diagnosed with mental health diagnoses or have a sexual abuse history. Previous studies have indicated that women with these conditions experienced more positive orgasmic responses and greater satisfaction when using cannabis before sex. It is also essential to explore the use of cannabis as a treatment for primary anorgasmia, as well as for women who used to be able to orgasm but are now unable to do so. This study, with anecdotal reports and less focused studies, suggests that cannabis may improve orgasmic functioning in these women as well.[13,54] To further evaluate the effectiveness of cannabis in treating female sexual dysfunction and determine the appropriate dosage, it is recommended to conduct randomized controlled studies.

Supplementary material

Supplementary material is available at *Sexual Medicine* online.

Funding

None declared.

Conflicts of interest

None declared.

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SUPPLEMENT 3
Newspaper and Internet Articles that support cannabis as a treatment for women who have orgasm difficulty

The Sex Therapists Using Pot to Help Patients Find Their 'Full Sexual Potential'

While weed is not a traditional tool in mainstream sex therapy, a handful of California sexologists have begun informally incorporating cannabis into their practices, arguing the drug can help patients relax, feel less inhibited, and achieve orgasm.

By Maria Yagoda

April 20, 2017, 3:25pm

According to thousands of people who swear by stoned sex, marijuana enables more present, embodied, and pleasurable sexual experiences. I've spoken with several people,

women especially, who've found that smoking is the only way they can get out of their heads enough to orgasm.

"As someone who can often have a difficult time enjoying sex, discovering high sex in college was huge," says a 26-year-old woman named Rebecca. "It upped my libido and kind of gave me an excuse to be weird."

While weed is not a traditional tool in mainstream sex therapy, both because it's still illegal in most states and because its sexual side effects have not been widely studied, a handful of California sexologists and therapists have begun informally incorporating cannabis into their practices, suggesting their clients try masturbating while high.

Diana Urman, a Bay Area sexologist, recommends weed to clients who are having trouble orgasming or who have never experienced an orgasm, even after decades of sexual activity.

"Now that [weed is] legal in California, my job is easier," Urman says. "Marijuana allows people to be more present in their bodies and more whole. It slows you down."

Urman, who has a PhD in human sexuality, sometimes observes dramatic changes when clients who have experienced difficulty orgasming try masturbating—and eventually having sex with a partner—while stoned.

"My clients can feel a lot of anxiety about not being able to let go or be fully present in their bodies, which creates a disconnect between mind and body," she says. "Weed often improves people's abilities to self-pleasure and, as a result, feel more connected to partners."

The ideal, of course, is to eventually access that connectedness without substances. Seth Prosterman, a certified sex therapist in San Francisco, views weed as a sort of stepping stone.

"While pot can help bring out our most sexy selves, disinhibit us, or relax us during sex, I would highly recommend that people learn to be in the moment and deeply feel and connect with their partners without using enhancing drugs," Prosterman says. "Pot can give us a glimpse of our sexual potential. Working towards our sexual potential, with our partners, is part of developing a higher capacity for intimacy, passion, and deep connection."

While the disinhibiting effects of weed are regularly recognized by sex professionals, marijuana is still not widely recommended as a tool. Sunny Rodgers, a professional sex

coach based in Los Angeles, says she's never suggested a client incorporate weed in their sex life, though adds, "I *have* had people tell me how great sex is when they can be high and ultra-relaxed."

When I ask Rodgers if she knows any professionals who do recommend weed to clients, she responds, "I've asked around and not a single coach or counselor I spoke with has recommended weed." Urman, who regularly recommends weed, finds this to be a systemic problem: "The usefulness of marijuana is not commonly understood among sex therapists."

For people struggling to find joy or pleasure in sex, weed can inject a playfulness that is otherwise hard to access, Urman says. In Gabby Bess's story on the role of weed in relationships, a man says he prefers to be with a partner who smokes and recounts a whimsical weed-fueled sexual experience he had with his girlfriend.

It upped my libido and kind of gave me an excuse to be weird.

"I remember one time she was smoking a joint while I was going down on her, and she said something along the lines of, 'This is how couples should smoke together,'" he says. "I remember blowing smoke on her clitoris while she came. Kinda hot!"

While there aren't many studies exploring the link between marijuana and sexual pleasure, there are a handful in which participants have offered anecdotal evidence. In the 2003 study "Cannabis Effects and Dependency Concerns in Long-Term Frequent Users," 54 percent of the 104 "experienced" marijuana users surveyed said smoking weed had the effect of sexual stimulation. (Ninety-five percent of respondents said it made them feel relaxed, while 86 percent said the drug made them feel comfortable.) Another Canadian study, from 2008, "Understanding the Motivations for Recreational Marijuana Use Among Adult Canadians," nearly half of the 41 adult participants said that marijuana enhanced their sexual experiences, with effects including increased libido, control, and sensitivity. Most recently, a small 2016 study in the *Archive of Sexual Behavior* comparing sex on weed and sex on booze found that sexual experiences with marijuana resulted in more pleasure (and fewer regrets) than drunk sex.

While Urman has never seen a client's sex life instantly transform after incorporating marijuana, she has observed that weed can be a catalyst on the path to having orgasms, individually or with a partner.

"It's a slow process, especially for someone who hasn't been orgasmic for their whole life. It's not like at some point they were orgasming and then stopped," she says. "But I have found their ability to self-pleasure has dramatically increased while using marijuana."

Rebecca, who had never had difficulties making herself come solo, found that smoking upped her (still pretty low) chances of getting off during sex. But there was always the possibility that weed would make things worse.

"It became kind of a crutch where, for a while, I would have to smoke literally before every time I had sex," she says. "As I got more and more anxious and depressed, it became worse, because if I was in a good place, great, but if I was in a bad place, I would get stuck there. It's very easy to get stuck in your head when high, which is dangerous for sex. You end up just internally freaking out about your relationship or how weird you're being or the fact that your vagina won't get wet. Because [weed] can also give you dry vagina, like dry mouth."

In his practice, Prosterman has found that the weed–sex combo is a bad idea for people who get anxious when they're high—but you probably guessed that.

"Any increase in anxiety will potentially interfere with sexual functioning, so for some people, weed can be an inhibiting factor in sex," he says. As with most sex advice, it's about figuring out what works best for you. "The main thing is to know how weed affects you *prior* to trying to use it for enhancing a sexual experience."

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MARIJUANA MOMENT

Marijuana Improves Sex And Could Help Close 'Orgasm Inequality Gap' Between Men And Women, New Study Indicates

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10 months ago

on
January 23, 2023

By
Ben Adlin

Yet another study has found evidence that cannabis can lead to better sex, with participants reporting heightened desire, more intense orgasms and sharpened sensory perception.

The paper, published Friday in the Journal of Cannabis Research, was led by Amanda Moser of East Carolina University, now a Denver-based sexologist specializing in combining cannabis and sex.

Results of Moser's online survey of 811 adults who've used cannabis found greater perceived sexual functioning and satisfaction regardless of age or gender: More than 70 percent of people said using cannabis before sex increased desire and improved orgasms. Another 62.5 percent said cannabis enhanced their pleasure while masturbating.

But Moser and co-authors say the study's findings are especially relevant for women's pleasure. The results "suggest that cannabis can potentially close the orgasm inequality gap," they write, referring to past findings that women who have sex with men are typically less likely to orgasm than their partners.

"Women may be more likely to orgasm when using cannabis before sexual encounters, which could contribute to equity in the amount of sexual pleasure and satisfaction experienced by both women and men," the study says.

Past studies have found that while more than 90 percent of men report usually having orgasms during intercourse, fewer than 50 percent of women do. "To me that's a problem," Moser told Marijuana Moment in 2019, shortly after her survey was conducted.
To recruit participants, Moser posted the survey on social media and shared links with medical marijuana and legal cannabis advocacy organizations. Respondents were excluded if they were under 18 or hadn't ever used cannabis.

Majorities of respondents identified as white (78.9 percent), female (64.9 percent) and college-educated (80.1 percent). Nearly a quarter (23.1 percent) identified as LGBTQIA+. Ages ranged from 18 to 85, and 73.7 percent said they were in a monogamous relationship.

The survey included questions on cannabis use and its effects on participants' perceived senses of smell, taste and touch. It also asked about a dozen questions regarding marijuana's influence on specific aspects of sex and arousal. "This comprehensive scale moves beyond the physiological effects (e.g., achieving an erection) and incorporates overall sexual functioning and satisfaction," the study says. Most respondents (62.8 percent) reported using cannabis daily. About 6 in 10 (58.9 percent) said they used cannabis intentionally before engaging in sex.

Many findings, the authors write, were consistent with existing literature. Both men and women, for example, reported heightened desire and orgasm intensity. Women said they were better able to have multiple orgasms.

"These results align with the increased relaxation when using cannabis," the study says. "Those who use cannabis report being more relaxed, whether mental or physical, which would improve overall sexual functioning and pleasure."

More than 70 percent of respondents said cannabis enhanced their senses of taste and touch. While that much might be clear to anyone who's ever had the munchies, the

study's authors note that taste and touch are also "two senses that are heavily used during sexual intercourse."

One area where the survey results break from past studies is men's ability to maintain and achieve an erection with cannabis. While some research indicated that cannabis could inhibit that ability, the men polled in Moser's study reported no such difficulties. "However, due to the self-report nature of this survey, social desirability may have prevented them from reporting erectile issues," the paper says.

Indeed, a fundamental limitation of the study is its reliance on self-reported recollections of cannabis users. "Participants were asked to retrospectively self-report based on many years," it says, "which would result in recall bias." It notes that "results are measuring participants' perceptions of the effects of cannabis rather than the collection of physiological data."

Moser points out that sexual satisfaction was improved by an especially wide margin when participants purposefully used cannabis before sex.

"These results may be because of the mental mindset that using cannabis will increase pleasure due to the aphrodisiac notions of cannabis rather than a true physiological effect," Moser acknowledges. "However, the relaxation effects of cannabis may contribute to increased desire or reduced inhibitions that might contribute to increased sexual functioning and satisfaction."

The study's findings may have implications for treating medical dysfunctions, especially with women, Moser says. "Women with vaginismus (i.e., painful intercourse) may benefit from the muscular relaxation and increased sexual functioning that results from cannabis use, while women with decreased desire could also see possible benefits."

Becky Lynn, a women's health specialist and professor of obstetrics and gynecology at Saint Louis University in Maryland, was the lead author of a 2019 study with similar findings. In that survey of women at an OB/GYN practice, women who said they used marijuana before sex were more than twice as likely to report satisfactory orgasms.

"I have seen [cannabis] used in women with chronic pain disorders that lead to painful sex, women who experience difficulty with orgasm or an inability to orgasm, and women who use it to improve their libido, which may not match their partner's libido," Lynn told Weedmaps at the time.

A 2020 study in the journal Sexual Medicine, meanwhile, found that women who used cannabis more often had better sex.

Numerous online surveys have also reported positive associations between marijuana and sex. One study even found a connection between the passage of marijuana laws and increased sexual activity.

Yet another study, however, cautions that more marijuana doesn't necessarily mean better sex. A literature review published in 2019 found that cannabis's impact on libido may depend on dosage, with lower amounts of THC correlating with the highest levels of arousal and satisfaction. Most studies showed that marijuana has a positive effect on women's sexual function, the study found, but too much THC can actually backfire.

"Several studies have evaluated the effects of marijuana on libido, and it seems that changes in desire may be dose dependent," the review's authors wrote. "Studies support that lower doses improve desire but higher doses either lower desire or do not affect desire at all."

CITATION: Adlin, B. (2023, January 23). *Marijuana improves sex and could help close "orgasm inequality gap" between men and women, New Study indicates.* Marijuana Moment. https://www.marijuanamoment.net/marijuana-improves-sex-and-could-help-close-orgasm-inequality-gap-between-men-and-women-new-study-indicates/

INDEPENDENT

NewsHealth

Cannabis could improve orgasms for women, study finds

Study finds women who used marijuana before sex were twice as likely to say they had 'satisfactory' orgasms

Maya Oppenheim

Women's Correspondent

Friday 12 April 2019 21:19 BST

Around a third of women in the US have used cannabis before sex and those who do say they experienced increased desire and better orgasms, a study has found.

The study published in journal *Sexual Medicine* found women who used marijuana before sex were twice as likely as those who did not to say they had "satisfactory" orgasms.

While women who regularly used the drug were twice as likely as occasional users to have satisfying orgasms.

Researchers noted that marijuana use has been on the rise among adults in the US as a growing number of states pass laws which legalise it for both medical and recreational purposes.

The study surveyed 373 female patients at an obstetrics and gynaecology practice in an academic medical centre in Saint Louis, Missouri. Overall, 127 women, or 34 per cent, reported using marijuana before sexual activity.

Researchers note there is a dearth of research that has looked at the drug's impact on sexual health – despite the fact cannabis is thought to act on the cannabinoid receptor in the brain which is involved in sexual function.

Marijuana has long been linked to an increase in sexual activity among teenagers - in the same way that alcohol and recreational drugs also have. Earlier research has also tied marijuana to unsafe sex and higher rates of sexually transmitted diseases.

But this study, carried out by Dr Becky Lynn of Saint Louis University School of Medicine and colleagues, focused on the link between cannabis and women's satisfaction with their sex lives, sex drive, orgasms, lubrication and pain during intercourse.

Overall, 197 women in the study, or about 52 per cent, did not use cannabis at all. Another 49 women, or 13 per cent, used the drug but did not do so before having sex.

"What's new about this study is that marijuana is framed as being useful for sex," said Joseph Palamar, a population health researcher at NYU Langone Medical Centre in New York who was not actually involved in the study.

He added: "Typically, drugs are investigated as risk factors for sex. I think this paper signifies that times are changing".

The study found women who did use cannabis before sex appeared to have more lubrication and less pain during intercourse than women who did not. However, the differences were too small to rule out the possibility they were down to chance.

Limitations of the study include its small size and that is was not a controlled experiment designed to prove whether or how cannabis might directly impact sexual health.

CITATION: Oppenheim, M. (2019, April 12). *Cannabis could improve orgasms for women, study finds*. The Independent. https://www.independent.co.uk/news/health/marijuana-sex-women-weed-cannabis-smoke-orgasm-a8867756.html

Forbes

Can Marijuana Lead To Stronger, More Orgasms During Sex? Here's What This Study Showed

Bruce Y. Lee

Senior Contributor

Feb 18, 2023,01:23pm EST

A study recently published in the Journal of Cannabis Research found that over 40% of the women ... [+]

Talk about getting into the weeds. A study recently published in the *Journal of Cannabis Research* came to an interesting conclusion: that cannabis could potentially be used to treat sexual dysfunctions. In the study, which was an online survey of 811 people, over 70% of respondents reported increased sexual desire and orgasm intensity with marijuana use. And over 40% of the women surveyed indicated "increased ability to have more than one orgasm per sexual encounter." Now, these results may sound dope. But before you ditch the haircut, the candles, the steady paycheck, or anything else that may enhance sexual arousal in favor of the ganja, consider the limitations of this study.

This study entailed administering an online survey to a convenience sample of adults ages 18 years and older who had indicated histories of cannabis use. In fact, 62.6% of the respondents reported using cannabis on a daily basis with 59.8% intentionally using cannabis before engaging in sex. Now, this probably wasn't a typical sample of people. A convenience sample doesn't mean that these were folks found outside a convenience store. It meant that the research

team from East Carolina University (Amanda Moser, MS, Sharon M. Ballard, PhD, and Jake Jensen, PhD) and North Carolina State University (Paige Averett, PhD) simply chose folks who happened to be conveniently available rather than a random sample from all-comers, so to speak. So it's difficult to tell how biased this sample may have been. Thus, results from this survey may not really represent what the general population might say.

Survey respondents did range in age from 18 to 85 years. But it did skew younger with an average age of 32.11. They were predominantly White (78.9%) and college-educated (80.1%) with 64.9% identifying as female. Close to a quarter (23.1%) of the respondents identified as LGBTQIA+. Nearly three-quarters (73.7%) of the respondents indicated that they were in monogamous sexual relationships.

The survey asked folks a bunch of questions about their cannabis use as well as their sensuality and ... [+]

The survey asked folks a bunch of questions about their cannabis use as well as their sensuality and experiences, functioning, and levels of arousal during sex, including masturbation. This included specific questions about achieving orgasms and maintaining erections and lubrication.

Of the 811 respondents, 601 felt that cannabis either slightly or significantly increased their sexual desire with such perceptions being higher for women than men. And 582 believed that cannabis slightly or significantly increased the intensity of their orgasms with no clear difference between men and women. Cannabis seemed to help folks feel like they were more masters of their own domain too, so to speak, with a majority of respondents (507 or 62.5%) reporting either slightly or significantly increased pleasure while masturbating.

So did the research team get a sense of what might have been going on here? Well, 71.9% of respondents did report slight or significant increases in the sense of taste with cannabis use. In this case, increases in taste didn't mean that they started dressing like Anne Hathaway. Rather,

they had a heightened sensitivity to tasting things with their tongues and mouths. A similar percentage (71.0%) of respondents reported slight or significant increases in touch.

This also might have been a "relax do do it" situation, too, as 87.7% of respondents reported slight-to-significant increases in relaxation during sex. Two tents may be helpful in camping, but being too tense is not going to help you orgasm and enjoy sex. Thus, it would make sense that relaxation could help enhance sex.

Speaking of relaxation, the survey results did address one standing concern that men may have about cannabis and their penises. There is the belief that the muscle relaxation properties of cannabis could decrease the ability of a penis to achieve and maintain an erection. Of course, an erection isn't a muscle-bound thing. Your penis, if you have one, doesn't have that much muscle so don't try lifting a barbell with it. Instead, an erection is blood filling the corpora cavernosa of the penis like air in a balloon animal thing. Well, based on the survey results, it wasn't hard to see that cannabis didn't seem to bring any erection fraud to the respondents. Most of the male respondents indicated no decrease in the ability to achieve (93.4%) or maintain (92.4%) an erection.

The survey results did address one standing concern that men may have about cannabis and their ... [+]

Of course, this study was far from avocado toast, meaning that it was far from perfect. Again, it was a convenience sample of cannabis users. So it could have selected for people who already believed that marijuana enhanced their sex lives. As you can imagine, if you already believe that something, like dressing up like Captain America, will aid your sex life, there's a decent chance that it will via the placebo effect.

Furthermore, survey responses don't always reflect what people truly feel or experience. Whenever you ask someone a question that includes the word "erection," you may not always get an honest answer. For example, if you were to ask someone in the supermarket, "Where do

you keep the cauliflower and are you able to maintain an erection," chances are you will find the answer to only one of those things.

It would have been more accurate to have directly observed all of the study participants during sex, but that could have been really creepy and resulted in a lot of, "Hey, schmoopie, who's that person with the tablet in the room with us?" questions followed by, "Oh, it's just for some study that I signed up for so that I could get money to buy you dinner."

The study also didn't include any objective measures of arousal and orgasms. These would include physiological data like heart rate and body temperature or the number of times one utters something like, "Don't stop", "Oh, my gosh,", "Oh, Jason Mamoa," or "linguini" during sex. Uttering "linguini" during sex, though, could mean that the person is really excited or just really hungry.

Moreover, the survey did not ask about a number of other things that may have affected the sexual experience. For example, there was no sense of what medications and other substances each person was taking. And speaking of marijuana, it wasn't clear what the person was eating as well. There are other things that can affect sex, too, such as amount of physical activity, general health, job satisfaction, the presence of a support network, the level of interest between the partners, the number of pillows on the bed, and whether "Slave to Love" by Bryan Ferry is playing in the background.

Finally, the survey didn't measure the dosage of marijuana used. Naturally, a gram of marijuana would be quite different from 100 metric tons. Accordingly, future studies may want to help establish how the dosage of marijuana may relate to the aforementioned effects.

While this study is not the first to show associations between marijuana use and increased sensation and relaxation, it doesn't necessarily mean that you should discard other means of increasing sexual excitement and start using marijuana. It's still not clear what repeated use of marijuana may eventually do to your body. For example, studies have suggested that cannabis

use could potentially have long-term effects on your brain, as summarized by the National Institute for Drug Abuse (NIDA). And while sacrificing your brain for your penis and vagina may seem like a fair trade, you should wait for more studies to truly determine what this trade-off may be. Nevertheless, this study does raise the possibility that cannabis could eventually be helpful for those with true sexual dysfunction that can't otherwise be solved. That's assuming that other options have been weeded out already.

CITATION: Lee, B. Y. (2023, February 20). *Can marijuana lead to stronger, more orgasms during sex? here's what this study showed.* Forbes. https://www.forbes.com/sites/brucelee/2023/02/18/can-marijuana-lead-to-stronger-and-more-orgasms-during-sex-heres-what-this-study-showed/

Psychology Today

Why Women Benefit More From Cannabis Use

Pain relief may be linked to estrogen levels.

Posted May 27, 2022 | Reviewed by Vanessa Lancaster

Written by Gary Wenk, Ph.D.

KEY POINTS

- Women respond differently to cannabis than men.
- The behavioral and neurobiological effects of cannabis in females have different magnitudes depending on the level of sex hormones.
- Females may be more sensitive to the pain-relieving and euphoric effects of cannabis than males.

Women respond differently to cannabis than men. Females report experiencing a greater "High" than male participants when given a relatively low dose of THC (0.015 mg/kg). Females tend to progress to tolerance and dependence faster than males after initiation of regular cannabis use.

Cannabis use is associated with improved sexual function among females, but not males. A recent study demonstrated that cannabis helps women orgasm who have difficulty having orgasms, enhances the frequency and quality of women's orgasms, and, of clinical relevance, helps women orgasm who have a female orgasmic disorder.

The behavioral and neurobiological effects of cannabis in females have different magnitudes depending on the level of sex hormones. Recent studies have investigated the interaction between fluctuations in the levels of the female sex hormones estrogen and prolactin and exogenously administered cannabinoids.

It is well known that cannabis increases prolactin release in males, causing gynecomastia (aka, man-boobs); in contrast, cannabis has no direct effect on prolactin levels in females. Female sex hormone fluctuations, especially estrogen, alter the function of the brain's endocannabinoid system in a region-dependent manner.

While the number of cannabinoid receptors in the limbic system (a collection of brain regions that control emotional responses) does not fluctuate, the responsiveness of the CB1 receptor, the receptor responsible for allowing us to experience euphoria, becomes much greater when estrogen levels are increasing.

When estrogen levels in the blood become elevated, the pituitary levels of the brain's endocannabinoid transmitters, 2-AG and AEA, are also significantly elevated. Taken together, these neurobiological changes might explain why women experience a greater level of euphoria at lower doses of THC.

No one currently understands the neurological mechanisms underlying these region-specific changes, and less is known about the effects of administering exogenous cannabinoids to cycling females.

One recent study reported that administration of a relatively small dose of THC induces a greater degree of anti-nociception (pain reduction) when estrogen levels are elevated. This anti-nociceptive action also correlates with a time when the endocannabinoid receptors in the PAG (a brainstem region responsible for blocking incoming pain signals) are more responsive, and endogenous levels of endocannabinoid neurotransmitters are elevated.

Estrogen does not bind directly to the brain's endocannabinoid receptors; however, it clearly interacts with how cannabinoids, both exogenous and endogenous, influence brain function. For example, 2ithin the hippocampus, a brain region responsible for forming new memories, estrogen acts at its receptor to increase the release of the endocannabinoid AEA, which, paradoxically, increases the activity within this brain region.

The importance of these changes remains on how the brain consolidates memories to be determined. Overall, due to the regular fluctuation in sex hormones, particularly estrogen, females may be more sensitive to the pain-relieving and euphoric effects of cannabis than males.

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Some Women Are Using Weed to Have Better Sex

Studies suggest women are using marijuana as a libido enhancer. Does it work?

Keren Landman, MD·

Illustration: Felicity Marshall

When Becky Lynn got a call from a California police station that her teenage daughter was in a car accident, she ran out of the house in the clothes she had on: tie-dye shorts and a T-shirt emblazoned with the modern portmanteau, "Cannaboss." Both were souvenirs from April's National Cannabis Festival, where Lynn, a gynecologist specializing in sexual medicine, appeared on one of the panels interweaved with yoga classes in the festival's wellness pavilion.

Her daughter was mortified by her getup, but otherwise fine. And while Lynn wasn't worried about the medicolegal consequences of appearing in marijuana merch in public — especially in a state where it's legal — she understood her daughter's chagrin.

"It's so not me," she says. "I'm a physician, I'm a scientist — I'm not a stoner. But I dunno — your teenager is always going to be embarrassed by you."

While she may not use marijuana herself, Lynn has a keen interest in how cannabis might help the women she sees in her St. Louis, Missouri office. Her interest was first piqued when several women confided to her that they used marijuana to improve their libido, and that they believe it helps them achieve otherwise elusive orgasms. "When I looked in the scientific literature, there really wasn't much data at all," she says. "I looked on the internet — it was exactly the opposite."

The discrepancy led her to do her own study, and in March 2019, that study became one of the largest to describe how some women are using marijuana for better sex: of nearly 400 women completing her anonymous questionnaire,127 said they used the drug before sex, and reported better sex drives and more than twice the odds of satisfactory orgasms

compared to non-users. Lynn's study doesn't irrefutably prove marijuana leads to better sex for women, but it demonstrates women aren't waiting on proof to use it that way. "Women do think that it can improve the sexual experience, improve drive, improve orgasm, lessen pain," says Lynn.

CITATION: Landman, K. (2019, October 31). *Some women are using weed to have better sex.* Medium. https://elemental.medium.com/some-women-are-using-weed-to-have-better-sex-f6a2dd223109

IFLSCIENCE

Cannabis Increases Your Orgasm Intensity And Helps With Multiple Orgasms, Study Finds

Male and female cannabis users all reported stronger orgasms whilst high.

JAMES FELTON

Senior Staff Writer

It's unclear if the aphrodisiac effect would counteract the stench of weedy sheets. Image credit: Olena Yakobchuk/Shutterstock.com

A study investigating sex and cannabis has found that cannabis users report better orgasms while high, as well as an increased libido, and sense of taste and touch.

Researchers, publishing their results in a recent study, asked 811 participants aged 18 to 85 years old a number of questions relating to their sex lives and cannabis use. Not noting much difference between the sexes and age groups, over 70 percent of the participants reported increased desire and orgasm intensity while high. Forty percent of the women, meanwhile, reported an "increased ability to have more than one orgasm per sexual encounter", according to the authors.

Over half of the people surveyed said that they had used cannabis intentionally prior to sexual encounters, suggesting they believe it to increase libido or pleasure. However, due

to the nature of the study (a survey) the researchers were unable to delineate whether increased pleasure from sex was from actual effects of the drug or a placebo.

"Those who reported intentionally using cannabis before sex had significantly higher scale scores than those who reported not intentionally using cannabis before sex," the team wrote in their discussion.

"This can be interpreted as those who intentionally used cannabis before sex perceived a greater benefit to their sexual functioning and satisfaction compared to those who do not intentionally use cannabis before sex. These results may be because of the mental mindset that using cannabis will increase pleasure due to the aphrodisiac notions of cannabis rather than a true physiological effect."

However, they also write that the relaxation effects of cannabis "may contribute to increased desire or reduced inhibitions that might contribute to increased sexual functioning and satisfaction", citing similar studies that have found improvement of sexual function after cannabis use, as well as longer times spent on foreplay. Those in the study who reported masturbating reported increased pleasure doing so while high.

One seemingly-unrelated finding of the study is that cannabis users reported an increased sense of taste and touch. The team writes that the question was included due to the use of the senses during sex.

"The enhancement of taste and touch could increase overall sexual functioning and satisfaction because these are two senses that are heavily used during sexual intercourse", they write, adding that no increased sense of smell was reported.

Though the team note a number of limitations, including that doses were not recorded by participants and that it wasn't comparative with people who don't use cannabis, the team believes the findings could be useful to explore, including possibly using cannabis to treat sexual dysfunction.

The study is published in the Journal of Cannabis Research.

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WELLNESS

Study: could cannabis help close the 'orgasm gap'?

Over 40% of women said cannabis increased their ability to have multiple orgasms during sex.

Published
10 months ago

on
3rd February 2023

By
Sarah Sinclair

Over 70% of men and women reported that cannabis increases desire.

Cannabis appears to increase sex drive and satisfaction, and may help close the gender gap when it comes to sexual pleasure, say those behind a new study

Researchers at East Carolina University and North Carolina State University in the US have suggested that cannabis could help to close the so-called 'orgasm gap' by increasing desire, satisfaction and orgasm intensity in both men and women.

The research team, led by Amanda Moser, a sexologist and cannabis researcher, investigated the effects of cannabis on sexual functioning and satisfaction, given the lack of science in this area to date.

They surveyed over 800 adults between the ages of 18 – 85-years-old. The majority of participants were female, white/caucasian and most said they were in a monogamous relationship. Almost a quarter of the participants identified as LGBTQIA+.

Participants were asked a series of questions related to sex and cannabis use, including its effect on desire, satisfaction, masturbation and orgasm intensity.

Over half reported using cannabis daily for recreational and medicinal purposes and intentionally used cannabis before engaging in sex.
Cannabis was shown to have a 'positive influence on perceived sexual functioning and satisfaction' regardless of gender or age.
Over 70% of men and women reported that cannabis 'slightly or significantly increases desire'. In contrast to previous research, men perceived either 'no effect or an increased ability to achieve and maintain an erection' when using cannabis.
In addition, over 70% of men and women reported that cannabis 'slightly or significantly increased orgasm intensity', with over 40% of women saying cannabis increased their ability to have multiple orgasms during sex.
"The relaxation effects of cannabis may contribute to increased desire or reduced inhibitions that might contribute to increased sexual functioning and satisfaction," the authors state.

Closing the 'orgasm gap'

They go on to say that these findings, along with further research, could have implications in the treatment of conditions such as vaginismus (which causes debilitating pain during sex) and in increasing libido. Low libido, or lack of sex drive, is a common symptom of many physical and mental health conditions and is experienced by many women during menopause.
According to Moser and colleagues, cannabis could even help close the 'orgasm gap' – a term coined to highlight the disparity in orgasms between men and women'.
Research shows that men are statistically more likely to orgasm per sexual encounter compared to women. More than 90% of men report reaching orgasm 'usually or always' during sex, compared to less than 20% of women. Over 80% of women say they don't orgasm from intercourse alone.
"Women may be more likely to orgasm when using cannabis before sexual encounters, which could contribute to equity in the amount of sexual pleasure and satisfaction experienced by both women and men," the authors say.
They concluded: "Overall, cannabis use tends to have a positive influence on perceived sexual functioning and satisfaction for individuals despite gender or age and cannabis might help to decrease gender disparities in sexual pleasure."

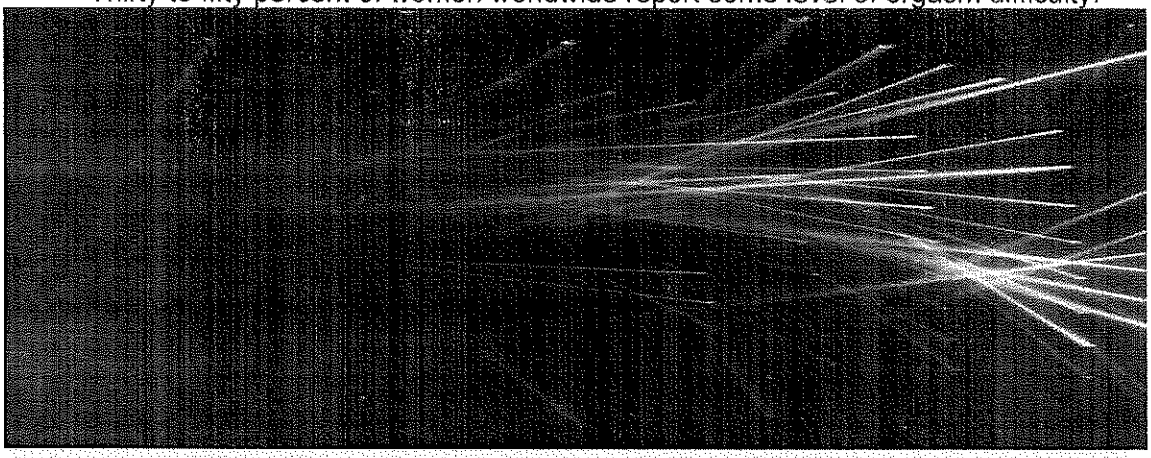
Why Orgasms Matter

New developments for women navigating challenges.

Posted December 18, 2023 | _Reviewed by Abigail Fagan

KEY POINTS

- Sexual satisfaction is now considered an important factor contributing to overall well-being by the WHO.
- It is widely acknowledged that the most important single predictor of sexual satisfaction for women is orgasm.
- Thirty to fifty percent of women worldwide report some level of orgasm difficulty.



Seeking connections

Source: Ryutaro Tsukata/Pexels

It is widely acknowledged that the most important single predictor of sexual satisfaction for women is orgasm. The ability to experience sexual satisfaction is now considered by the World Health Organization as an important factor contributing to overall well-being and impacting global health. Because this is so critical, I have addressed this issue in a previous post where I share tools for working through obstacles to experiencing orgasm. Here, I give an update about new developments in the field of sexology.

Thirty to fifty percent of women worldwide report some level of orgasm difficulty (OD), a statistic that has not changed in 50 years. Studies show that although women may not be formally diagnosed with OD, about half still indicate moderate to high distress regarding their condition. It is the second most frequently reported sexual problem (with lack of sexual desire coming in at number one).

A conversation with a pioneer in sexual wellness

In this post, I share the highlights of my conversation with Suzanne Mulvehill, founder of the Female Orgasm Research Institute (for the full interview, see here).

We discuss the correlation between mental health conditions and OD in women and highlight the importance of relaxation and focus during sexual experiences. Last but not least, we discuss how research has shown that cannabis may be of help.

Orgasm difficulty in women can have various underlying psychological and physical factors

The most frequently mentioned reasons for OD are (in order) stress/anxiety, arousal difficulty, sex-specific anxiety, and issues with their partner.

The use of antidepressant and antipsychotic medications, illness, sexual trauma, and stigmatization can also contribute to sexual dysfunction and OD.

The psychological toll of orgasm challenges

The feelings reported by women with OD include frustration, feelings of inadequacy, relationship issues, familial discord and divorce, and a negative impact on general mental health.

The loop of stress leading to sexual and general frustration can lead to more feelings of inadequacy, brokenness, and loss of self-esteem which in turn creates more stress. The feeling of brokenness for women about their sexuality is common.

These difficulties can be influenced by multiple factors such as age, hormonal status, sexual experience, history of physical or psychological trauma, general mental health, type of stimulation, and the nature of the sexual activity.

A recent study by Mulvehill found that women diagnosed with OD reported 24% more mental health issues than non-OD women, 52% more PTSD, and 29% more depressive disorders.

Three types of OD

OD can be broken down into three categories: primary, acquired and situational. (Anorgasmia is the technical term for problems experiencing orgasm.) Primary OD is when the person has never ever had an orgasm. Acquired or secondary anorgasmia is when one could previously orgasm but is no longer able to do so. Situational OD refers to particular circumstances in which one is unable to orgasm (for example during partnered sex vs. masturbation).

What you can do if you are experiencing OD

First and foremost: Don't panic. It is not unusual for our ability to experience orgasm to come and go (pun intended). It is precisely when people start to panic about not experiencing orgasm that it becomes a thing. As I like to say, "A watched orgasm never boils." Once we become self-conscious about orgasm, we tend to get into our heads about it. Good sex starts with being in our bodies and our sensations. When we can be in our sensations, sex tends to be sensational.

I advise clients who report ongoing symptoms of OD to learn to take a stand for what they need and want to increase the probability that they will experience orgasm, whether it's with a partner or solo.

Mulvehill says we need to become friends with our sexual style (and yes, we all have unique erotic fingerprints, which is how we inhabit and express our own sexuality and relate to lovers) We also need to know what relaxes us, helps us focus and turns us on. She emphasizes the importance of feeling safe and understood by our partners.

New report: Cannabis and OD

Recently, for her doctoral dissertation, Mulvehill studied the use of cannabis before sex by women with OD. In her study, women who reported a history of sexual abuse had a more positive orgasm experience when using cannabis before partnered sex. Another recent study found that women who use cannabis are twice as likely to experience orgasm.

Mulvehill, together with Jordan Tischler, a Harvard Medical School professor and cannabis specialist who treats sexual issues are behind efforts to get OD on the list of conditions for which medical cannabis can be prescribed.

This important new research into this aspect of women's sexual wellness deserves more attention and study.

Related conditions and how to navigate OD

An experience related to OD is a lack of spontaneous sexual desire. Although lack of desire might be a factor that contributes to orgasm disorders, in my clinical experience I see many women who orgasm easily but report no spontaneous sexual desire.

My advice for women experiencing OD is to communicate, explore, practice masturbation, and Kegel, Kegel, Kegel. A Kegel practice can be a powerful part of tuning up the orgasm machinery. Remember you can't play in a band unless you've already learned how to play your own instrument!

Further, if you have shame about sex or have traumas large or small, you should talk to a therapist. It will allow you to unpack and reevaluate old learning around sex and update your map.

We need to radically accept what is while at the same time celebrating our bodies, our senses, and our sexual selves.

In conclusion

It is important to know that orgasms, while not the be-all-end-all of the sexual world, can become more available when we say "Yes!" to the experience we are having. When we can simply *allow the sensations to feel good*, without striving for an orgasm or bigger or better sexual experiences, paradoxically we can release ourselves into the sensations, and feel more connected to ourselves and our partner. What we know from individuals who report sexual satisfaction over a lifetime is that good sex is sex that is about connection.

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CITATION: Wise, N. (2023, December 18). *Why orgasms matter*. Psychology Today. https://www.psychologytoday.com/intl/blog/why-good-sex-matters/202312/why-orgasms-matter

inhaleMD

September 18, 2023

New Mexico Medical Cannabis Advisory Board
Medical Cannabis Program
1474 Rodeo Road., Suite 200
Sante Fe, NM 98505

Dear New Mexico Medical Cannabis Advisory Board Members,

I write to support the petition to add female orgasm difficulty/disorder (FOD) as a condition of treatment for the state of New Mexico's Medical Cannabis Program. FOD is an under-reported public health problem of enormous proportion. Over 41% of women will experience this problem.[1] This is vastly more than will experience high blood pressure [2] or diabetes.[3] Women with FOD reported 24% more mental health issues, 52.6% more PTSD, 29% more depressive disorders, 13% more anxiety disorders, and 22% more prescription drug use than women without FOD. Women with sexual abuse histories and FOD (38.6%, n=74/202) reported 32.9% more sexual abuse histories than women without FOD (27.6%, n=51/185).

Unfortunately, despite the pervasive and pernicious effects of Female Orgasm Difficulty/Disorder, there are no conventional medications that can help.[4] Cannabis for female sexuality has actually been researched for over 50 years. Study after study has revealed that cannabis helps women with this issue. [5-16] Yet no state has yet put FOD on their list of approved indications. I hope that New Mexico will be the leader.

I have been a practicing Cannabinoid Specialist for over 12 years. I am faculty at both Harvard Medical School and MassGeneral Brigham Hospital. My research focus is on cannabinoids for human sexuality. In my practice, I have been prescribing medical cannabis to patients who have FOD and can attest that women report benefit from cannabis in ways no other medication or program can match.

If I can be of further service or answer any questions, please do not hesitate to contact me.

Warm Regards,

Jordan Tishler, MD
Harvard Medical School
President, Association of Cannabinoid Specialists
CEO, inhaleMD

617-477-8886 Phone & Fax
www.inhaleMD.com

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September 20, 2023

Board of Medicine

RE: New Professional Recommendations for Medical Marijuana Treatment -Female Orgasmic Difficulty/Disorder (FOD)

Dear Board of Physicians,

I am petitioning the Board to add female orgasm difficulty/disorder (FOD) as a condition for

treatment in your State Medical Cannabis Program.

Up to 41% of women experience sexual problems in the National Health and Social Life survey of 3000 women. In the PRESIDE study over 31,000 women were surveyed. Again, 44% had sexual dysfunction and 20% had problems with orgasm. This is more than will experience glaucoma, Parkinson's, Crohn's and other approved conditions. Currently there are no conventional medications that can help.

Cannabis to improve sexual function in men and women has received a lot of attention in the last 10 years. Study after study has revealed there is improved enjoyment, sensation, pleasure and orgasm.

I have been certifying patients for Cannabis and studying the various benefits for 5 years. I am a Board-certified OBGYN (30 years) and practice Sexual Medicine (18 years).

Please consider the addition of Female Orgasmic Disorder to the list of approved conditions.

If I can be of further service or answer any questions, please do not hesitate to contact me.

Sincerely,

Maureen Whelihan MD FACOG

USF '93 UF-Shands Jax '97

inhaleMD

September 20, 2023
Board of Physicians
Connecticut Department of Consumer Protection
Medical Marijuana Program
450 Columbus Blvd, Suite 901
Hartford, CT 06103-1840

RE: Section I: Professional Recommendations for Medical Marijuana Treatment
Female Orgasmic Difficulty/Disorder (FOD)

Dear Board of Physicians,

I write to support the petition to add female orgasm difficulty/disorder (FOD) as a condition of treatment for the state of Connecticut's Medical Cannabis Program. FOD is an under-reported public health problem of enormous proportion. Up to 41% of women will experience this problem.[1] This is vastly more than will experience high blood pressure [2] or diabetes.[3] Unfortunately, despite the pervasive and pernicious effects of Female Orgasm Difficulty/Disorder, there are no conventional medications that can help.[4] Cannabis for female sexuality has actually been researched for over 50 years. Study after study has revealed that cannabis helps women with this issue. [5-16] Yet no state has yet put FOD on their list of approved indications. I hope that Connecticut will be a leader.

I have been a practicing Cannabinoid Specialist for over 12 years. I am faculty at both Harvard Medical School and MassGeneral Brigham Hospital. My research focus is on cannabinoids for human sexuality. In my practice, I have been prescribing medical cannabis to patients who have FOD and can attest that women report benefit from cannabis in ways no other medication or program can match.

If I can be of further service or answer any questions, please do not hesitate to contact me.

Warm Regards,

Jordan Tishler, MD
Harvard Medical School
President, Association of Cannabinoid Specialists
CEO, inhaleMD

References

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Female Orgasm Research Institute
Proven Pathways to Orgasm

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November 8, 2023

To Whom It May Concern:

This letter is my personal testimony in support of female orgasmic difficulty/disorder becoming a condition of treatment for medical cannabis.

I saw four sex therapists over a period of more than thirty years to help me overcome my orgasm difficulty, yet, and unfortunately, talk therapy and the exercises the therapists suggested did not help me access my orgasm. I secretly suffered from the feelings of inadequacy and shame that accompanied my orgasm problem for decades.

After reading online that cannabis could help women orgasm, I got a medical perscription for it in Florida. I discovered that cannabis helped me access orgasm and gave me a new sense of confidence. I sold my international company and returned to school for my PhD to conduct research to evaluate cannabis as a treatment for female orgasmic difficulties/disorder. Most recently, I presented my statistically significant results on cannabis as a treatment for FOD at the World Conference for Sexual Medicine in Dubai, in December, 2023.

Please approve the petition to add female orgasmic difficulty to your state's condition of treatment for medical cannabis.

Sincerely,

Suzanne Mulvehill, PhD, MBA
Executive Director

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February 25, 2024

Ohio Medical Cannabis Board
medicalmarijuana@med.ohio.gov

Re: *Female Orgasmic Difficulty/Disorder* to be considered as a condition for treatment with medical cannabis

To Whom It May Concern:

I am the President of the International Institute of Clinical Sexology, where Dr. Suzanne Mulvehill completed her doctoral work and earned her PhD in Clinical Sexology. Her doctoral dissertation is titled:

Cannabis for the Management of Female Orgasm Difficulty/Disorder: An Observational Study.

This research supports the use of medical marijuana to treat or alleviate the condition of Female Orgasmic Difficulty Disorder.

As a sex therapist with a PhD in Human Sexuality, I can confidently state that conventional medical therapies are insufficient to treat this disorder.

Please do not hesitate to contact me for any further information.

Sincerely,

Carol L. Clark, PhD, LMHC, CST
President, IICS

SEX COACH U

February 29th, 2024
norelyn@sexcoachu.com

Re: Female Orgasmic Difficulty/Disorder to be considered as a condition for treatment with medical cannabis

To Whom It May Concern,

As a certified sex coach with a PhD in Human Sexuality and certified cannabis health coach, I am writing to ask that you approve Female Orgasm Disorder as a condition for prescribing cannabis.

My professional experience supports the use of cannabis as an extremely effective treatment for orgasm disorders. In addition, I have found that conventional treatments and therapies are not sufficient to treat this disorder.

Thank you for your consideration. Please do not hesitate to contact me for any further information.

Sincerely,

Norelyn Parker, PhD, CSC
General Manager, Sex Coach U