That Obscure Concept of Desire: ideological wars over the pharmacological enhancement of female sexual desire

Abstract:

This article discusses the scientific debate surrounding the appropriateness of pharmacological interventions aimed at increasing female desire. The analysis of this debate shows how preferences for a given definition of desire, different ways of operationalizing it, as well as diagnosing and treating low levels of it are clearly motivated by a particular worldview. It also shows how selectively interpreted empirical data are used to produce ‘knowledge about desire’ that supports a specific value system or serves particular ends.

1. Introduction

On 18 August 2015, flibanserin (under the trade name Addyi), the first drug for premenopausal women complaining of low sexual desire, was registered in the US. Four years later, another drug, bremelanotide (Vyleesi), joined the registered agents. Several drugs are lined up for the completion of clinical trials and registration (Simon 2018). Nowadays, the problem of low desire accompanied by distress (so called hypoactive sexual desire disorder or HSDD) in women is one of the main targets of pharmaceutical companies, which continuously propose new solutions: from drugs that act to relax the small muscles in the corpora cavernosa to agents that modulate neurotransmitters in the brain. Low desire in women is the most frequently reported sexual problem in clinics (Brotto et al. 2010). The market is therefore tempted by the promise of billions of dollars in profits, similar to those once made by Viagra.

As attempts to pharmacologize female sexual dysfunctions become more intense, divisions between supporters and opponents of new methods are becoming more pronounced in the sexological community. This analysis is an attempt to dissect the chaotic exchange of arguments and counter-arguments from very different spheres into clear battlefields, beginning with the most eagerly discussed topic of drug safety and efficacy, then moving on to deeper conceptual and ethical fields of disagreement. Within the latter two fields, I will point to deliberate misuses of science that are employed in order to justify the appropriateness of pharmacological interventions. I will also show how scientific conceptions of female desire in practice demonstrate the influence of non-epistemic values on science.

1. **A Drug for Seduction or Sedation? The first Battlefield: the Efficacy and Safety of Drugs.**

Addyi is a drug that is designed to decrease serotonergic transmission and increase dopaminergic and noradrenergic transmission. After a battle with the FDA that was long, difficult, and fraught with foul play (Chańska and Grunt-Mejer 2016; Moynihan 2014), Addyi was approved for marketing as a drug for HSDD. Key issues that were raised in the registration of the drug were its marginal efficacy and the significant risk of side effects. In clinical trials, the drug failed to achieve efficacy over placebo in measures of daily experience of desire, so these measures were changed at the request of the manufacturer to ‘sexually satisfying events’ (SSEs), namely any partnered or single sexual activity. Results presented to the FDA indicated that use of the drug increased SSEs over placebo by between 1 and 1.5 SSE per month; however, the largest meta-analysis to date, published after the drug had already been approved by the FDA, indicates a lack of efficacy of flibanserin over placebo on all accepted clinical trial endpoints (Saadat et al. 2017). Side effects such as fainting, dizziness, drowsiness, nausea and fatigue were much more common in the experimental group and caused twice as many to drop out of further participation in the study than in the control group. For this reason, the drug has a ‘black box warning’ – a label that warns consumers of the drug of extremely serious side effects and interactions with other agents. The fact that each dose of the drug is equivalent to the fogging effects of four shots of whisky allows some commentators to suggest that the main effect of the drug may simply be the sedation of women (Hogenmiller, Hirsch, and Fugh-Berman 2017).

The second registered drug, Vyleesi, which is also intended to act on the central nervous system, showed a positive effect in only a minority of women. Side effects include severe nausea, significantly elevated blood pressure, hot flushes, headaches and vomiting. Subjects clearly preferred placebo when it came to continuation of blinded trials and willingness to participate in open-label studies (Spielmans 2021). According to sceptics, the FDA has once again registered a drug that “could be useless at best and harmful at worst” (Pearson 2019).

Despite these discouraging results and opinions, the researchers responsible for the clinical trials and subsequent promotion of both these drugs claim that we are dealing with “safe, effective, and well-tolerated” agents (Clayton et al. 2016, 325) and that their critics are “lacking proper understanding of the condition of hypoactive sexual desire disorder” (Goldstein, Simon, and Parish 2016)

1. **The Pill or the Couch? The Second Battlefield: What is the Nature of the Problem and the Appropriate Interventions?**

How would this “proper understanding” of low sexual desire manifest? Both camps have differed significantly on its conceptualization and the assumed factors that determine its level. At first glance, both sides of the debate do not contradict each other and acknowledge the existence of three groups of factors that influence the level of desire: biological, psychological and socio-cultural. However, the understanding of the interrelationships between these factors and their content significantly differentiates the two groups. Pharmacoenthusiasts present these three groups of factors as independent sets, each of which requires different treatment (Kingsberg 2014). Desire is understood by them as a biologically determined drive which manifests itself as a spontaneous sexual desire that does not require external stimulation, similarly to hunger and thirst. The biological cause of a long-term decrease of desire is currently presented by pharmacoenthusiasts according to the hypothetical mode of the action of both registered drugs as “an imbalance of neurotransmitter (chemical messengers) activity in the brain” (https://www.vyleesi.com/know-hsdd/) that requires pharmacological intervention. The cited evidence for a biological cause of HSDD is supposedly the action of the drugs themselves and the differences in brain activity between ‘healthy’ women and women with HSDD (<https://addyi.com/hsdd/>).

The first argument is flawed both pragmatically and logically. If a change in neurotransmitter levels causes higher desire, then inferring the cause of a disease from an observed response to treatment would be an example of an ex juvantibus fallacy. Just as a headache is not the result of an aspirin deficiency or a skin rash the result of a steroid imbalance, so a lack of desire would not necessarily be the result of too little dopamine or noradrenaline. Yet, the logical critique gives way here to a pragmatic one: the drugs work so poorly that it is difficult to see their effect as any confirmation of the assumed biological imbalance.

The argument from brain activity studies, as presented by the drug manufacturers, is also incorrect for several reasons. The Addyi website reports that the brains of “women with HSDD had little to no activation” when exposed to erotic materials (https://addyi.com/hsdd/). This and other representations of neuroimaging results that supposedly support a biological cause for HSDD are highly problematic, ranging from unauthorized claims about the dormancy/awakening of a particular brain region to health and disease rhetoric based on differences in images. The brains of women with low desire were not dormant but showed increased activity in other areas when viewing visual erotica compared to the brains of women who were described by researchers as ‘normal’ (Arnow et al. 2009; Bloemers et al. 2014; Woodard et al. 2013). According to the interpretation of the cited researchers, women with HSDD showed greater activity in brain areas responsible for, inter alia, self-awareness and control of their own behavior in response to stimuli, and less activity in regions responsible for stimulus processing (Arnow et al. 2009; Woodard et al. 2013). None of the studies examined how the brain reacts in the case of a woman who has low desire but is not stressed by it (i.e., meeting only 1 of the 2 criteria necessary for diagnosing HSDD). Therefore, we do not know whether to interpret these differences as an insight into the biological underpinning of low libido, or rather as a neural correlate of distress – in this case related to visual erotica, which can recall a lack of personal sexual satisfaction, abuse, partner pressure, etc.

In the cited studies, it was assumed a priori that normal activity would be found in women with higher levels of desire, while abnormal activity would be present in women with low desire. Accordingly, the authors focused attention on explaining how “alterations in activation of limbic and cortical structures” in women with HSDD (Woodard et al. 2013, 1068), “may interfere with normal sexual response” (Arnow et al. 2009, 484). Needless to say, no objective measure indicated that the observed lower or higher brain activity in women with HSDD (compared to women without this diagnosis) was abnormal per se (e.g., disturbed due to an odd pattern of activation).

Both the pathologizing of biological processes according to a preconceived social valuation of their behavioral manifestation and the drawing of causal instead of correlational conclusions on the basis of neuroimaging data do not happen only in relation to HSDD. Aldridge (2005) demonstrates a similar misuse of interpretation using fMRI images of the brains of gamblers (in whom a weak response to winning was portrayed as an anomaly that results from a poorly functioning reward system in the brain) and shows how a similar process would consistently look for properties that we do not socially recognize as unwanted: “the dangers of leaping to causal conclusions involving brain abnormalities can be seen by applying the same logic to the posterior hippocampus enlargement found in London cab drivers. Rather than concluding that the enlargement results from spatial demands, we might conclude that this “abnormality” creates an insatiable need for spatial stimulation, chaining its victims to potentially dangerous employment with limited executive prospects” (p. 954).

Contrary to advocates of pharmacological solutions, neuroimaging studies are in no way evidence of a biological cause of low desire, much less a cause that lies in a neurotransmitter imbalance. What we see during neuroimaging is nothing more than a neuronal correlate of processes whose “causes” – whether the direct stimuli that triggered these processes or motivations built on memory traces and associations with sexual activity – are not reducible to a given proportion of neurotransmitters. The differences in neural reflections of mental processes are obvious: the brain of a person who craves sex and has pleasant associations with it reacts differently to visual erotica than the brain of a person bored or annoyed by sex. However, this does not prove that the brain of any observed woman was malfunctioning and required pharmacological regulation.

If not neurotransmitters or another biological factor, what determines the level of desire? Pharmacoskeptics assume that psychological and biological factors are interdependent and their mutual influence is highly contextual (Brotto et al. 2010). In psychobiological models, sexual inhibition is not necessarily seen as problematic, but it may be regarded as an adaptive response to unfavorable circumstances. It has also been noted that the problem is the discrepancy of desires in a relationship rather than the individual level of desire of each partner (Mark and Lasslo 2018).

Furthermore, the definition of desire itself is more complex and includes, in addition to the spontaneous and undirected sexual need, the ability to interpret given stimuli as erotic (Brotto et al. 2010) and the cognitive-emotional motivations that push for sexual activity (Basson 2000) and which may be influenced by numerous psychological factors, including relational ones (for a review of research, see Mark and Lasslo 2018). The high efficacy of two types of psychological therapy (mindfulness and cognitive therapy) in treating low desire has been proven in research (Brotto 2017). Similarly to medication, these therapies have an assumed mechanism of action: they are supposed to work by enhancing a response to erotic stimuli, but some suggest that they may help mitigate negative cultural influences on female sexuality (see van Anders et al. 2021 for discussion). Their effect sizes are significantly better than those of pharmacological therapies (Chivers et al. 2016). Additional advantages of psychological interventions are their positive long-term side effects in sexual functioning after therapy has been completed.

Indicating that they do not meet the methodology standards of sexual medicine, such as double-blind procedures and standardized interventions, drug researchers show no enthusiasm for the very good results of psychotherapy studies (Pyke and Clayton 2015). Researchers on the other side of the barricade state that these standards cannot be maintained due to the nature of psychological research (e.g., it is difficult to imagine a placebo group for psychological treatment of HSDD. They also indicate the significant limitations of research that meets rigorous medical standards and the difficulty of translating the “statistical significance” of their results into real-world usefulness (Chivers et al. 2017). Although at the most visible level the debate is about the appropriate methodology and interpretation of research findings, the discussion also clearly raises normative questions: is low desire a biological disturbance, or is it a state that bears no signs of mental disorder but is problematic in a relationship? On the other hand, maybe it is a normal reaction to an imperfect environment? The debated potential consequences of adopting a given operationalization of desire and the methods of diagnosing and treating its deficiency are clearly motivated by preferences for a given world view, thus demonstrating the entanglement of the science of desire with social values. Recognition and analysis of these values is necessary to identify which assumptions have been tacitly made in their name without empirical justification, as well as which empirical indicators have been selectively chosen, rejected, or specifically interpreted in order to draw conclusions supporting a given value system from the ‘knowledge of desire’ thus produced. Let us look at these value systems.

1. **Who Desires Female Desire? The Third and Final Battleground: What are we Fighting for when Addressing Reduced Desire in Women?**

The beginning of the fierce exchange of arguments on the best approach to female desire dates back to the changes in the diagnosis of this disorder between DSM-IV-TR (in which HSDD criteria were based on the drive model, and in which biological factors were explicitly assumed to be involved in the genesis of the disorder) and DSM-5. In the new edition, female sexual arousal and interest disorders have been merged, creating one entity (FSIAD); also, the criteria concerning desire have been modified in accordance with newer concepts, including the responsive desire model, according to which sexual activity in women in long-term relationships is often motivated by factors other than spontaneous desire (e.g. the wish for emotional closeness with a partner, the experience of sensual pleasure, etc.) (Basson 2000).

Positive feelings during sex trigger the desire to continue sexual activity (in which case, it is called ‘responsive desire’). The responsive desire model proved to accurately describe the experience of many women and was readily accepted as normative, primarily because it allowed a significant proportion of women to be depathologized (Brotto et al. 2010). Advocates of recognizing responsive desire as being equal to spontaneous desire have also emphasized the androcentric nature of the latter. The new broader norm of desire for women was thus based on the experience of women rather than a generalization to all people of the male way of experiencing desire.

The staunch opponents of the new diagnosis and criteria were primarily researchers and clinicians working with pharmaceutical companies that were involved in the race to register the first drug for low desire in women. With the new criteria taking into account the normality of responsive desire, the pool of women suffering from FSIAD became significantly smaller than the population of women suffering from HSDD, thus the potential consumer base for the drug was reduced. The arguments put forward by opponents of this new diagnostic entity ranged from the formal to the strongly persuasive. The formal ones have been discussed in the scientific literature (Graham, Brotto, and Zucker 2014; Balon and Clayton 2014), while arguments appealing to emotions and spiced with feminist rhetoric have been formulated by the same authors outside the scientific discourse (e.g. Even The Score, 2014). For example, both a researcher and a spokesperson for Addyi, Anita Clayton (2015), suggested on her blog that acceptance of the responsive model is acceptance of nonconsensual sex and as such is incompatible with feminist values, as “what these people are REALLY saying is that a 'no' from a woman when it comes to sex might not really mean 'no' if her desire is going to kick in anyway." This example of an argument supporting the normality of only spontaneous desire was part of a wider campaign to convince both the FDA and potential female clientele that drugs designed to restore spontaneous desire were weapons in the fight for female autonomy, health and sexual fulfilment (Chanska and Grunt-Mejer 2016; Segal 2018).

For some pharmacoskeptics, the first problem with this narrative is the nature of sexual fulfillment. During an FDA-ordered special panel on HSDD, women invited by the manufacturer of Addyi claimed that more sex means getting more out of life. This seemingly strong valorization of sexuality was, however, limited by the narrow framework of its acceptable expression: none of the panelists stated that use of the drug was about actual sexual exploration and freedom; instead, it was about restoring desire for a partner they had been with for many years. The panelists interpreted their own successful sex lives in terms of pleasing their male partners, who were said to enjoy sex more when a woman engages in it not out of a sense of obligation but out of her own desire. As Segal notes “Addyi was almost helplessly understood by its own promoters to be, in the first instance, a(nother) drug for men – just one that they didn’t have to take themselves” (Segal 2018, 7).

An issue that is relevant to analysis of the claim that Addyi enhances female sexual autonomy is the significance of the distress that accompanies HSDD. This distress includes fear of the consequences of not being sexually available to one’s partner (relationship breakdown, partner’s infidelity, frustration and aggression) and guilt caused by beliefs that sex in a relationship is a given, a relationship without sex a hard thing to imagine, and life outside of a relationship with a man is a disaster. Feminist scholars note that actual autonomy would require the freedom not only to have sex out of desire but also to say “no” (Fahs 2014). If we listen carefully to the voices of women with HSDD, we can see that this freedom is highly questionable (Frost and Donovan 2019; Traeen 2008; Wood, Mansfield, and Koch 2007). Two very different conceptions of autonomy thus emerge among the pharmacoenthusiast and pharmacoskeptic camps: the first camp understands autonomy as the freedom of consumer choice to enable (if effective drugs exist) sex driven by bodily needs rather than out of a sense of obligation; on the other hand, the second camp sees autonomy as a broader contextual freedom in which there is no external or internalized pressure to increase female libido. In this context, pharmacological boosting of desire is seen as “a very progressive approach to a very old goal” (van Anders et al. 2021), thus illustrating a bridge between the new norms of sexual consent and the still-active obligation to serve male needs.

Pharmacoskeptics further note that women in stable heterosexual relationships receive a diagnosis of HSDD disproportionately more often than single women or women in same-sex relationships (Rosen et al. 2009). This can be explained in a few ways.

The first explanation refers to the androcentric norm, according to which spontaneous, high and relatively constant-over-time desire is normal. Such desire is more characteristic of men than of women. At the same time, heterosexual relationships have a significant risk of a spontaneous desire discrepancy after a certain period of time because, on average, male desire decreases more slowly than female desire over the course of a relationship (Klusmann 2002). Instead of recognizing this discrepancy as normal, the androcentric perspective pathologizes a large proportion of women in heterosexual relationships and defines the relational problem as a disorder of the individual. This happens regardless of the objective level of desire of the woman, which would not be a problem at all in the absence of a partner, or with another partner, or under other relational settings (e.g. a sexually open relationship or without sexual mutual obligation). A new framing, FSIAD, partly addresses these concerns by not only normalizing responsive desire but also noting that a desire discrepancy is not sufficient to diagnose a low-desire disorder. Skeptics note that, despite this, the problem of low desire is still located within the individual, and that the creators of the DSM classification fail to note the structural gendered inequalities that explain the very fact of frequent desire discrepancy (van Anders et al. 2021)

These heteronormative gender inequities account for the second explanation of the frequency of low desire, particularly in heterosexual relationships. The factors that would systemically contribute to problems with female desire include the cultural beliefs that define heterosexual relationship dynamics. These include strictly sexual beliefs: the sexual role of a woman is to bring satisfaction to her male partner rather than to herself; the ideal form of sexual activity is penile-vaginal intercourse, i.e. activity directed at male rather than female sexual pleasure; a woman is an object of desire rather than a subject of desire (Richgels 1992). Other gendered problems also play a role, including the stereotypical female role of caring for a partner, which has a detrimental effect on libido; bitterness and fatigue caused by lack of equitable participation in childcare, household and relational labor; a sense of sexual obligation exacerbated by lower economic power in a relationship (van Anders et al. 2021). Acknowledging cultural and psychological factors does not mean ignoring their biological correlates; however, they are not necessarily treated as causes of low desire but as one of its various manifestations, and even as an outcome of non-biological phenomena in specific situations (van Anders and Watson 2006).

In this context, for the pharmacoskeptics, the reductionist vision of desire as a biologically regulated drive seems doubly inappropriate: firstly, it is inaccurate as it fails to capture the complexity of desire expressed by women; secondly, it has potentially harmful consequences. It is precisely these consequences that seem to be the main drivers of change in the contemporary debate about the best operationalization of desire and the question of what level of desire can be considered alarmingly low. There is a clash between two value systems with different understandings of the very purpose of intervention. High desire, which seems to be the ultimate goal for pharmacoenthusiasts, is not an intrinsic goal for pharmacoskeptics but at best a side effect of significant social change. Similarly, low desire is not a problem on its own but one of many symptoms of a system based on unfavorable norms of female sexuality. The real issue, then, is not the efficacy and safety of these drugs since an effective and safe drug would risk diverting attention from the relational and cultural determinants of low desire. Nor is the quality of evidence for one or another conception of desire. The problem is the practical consequences of accepting a given concept of desire as normative.

Science can be value-laden in many ways. Some non-epistemic values are an inherent part of scientific endeavor and may be scrutinized in fruitful ways, thus leading to new perspectives and theories (Douglas 2015). In the case of the science of desire, we see the validity of this approach in the critical analysis of the invisible androcentric assumptions that have contributed to the formulation of a broader conception of desire that better reflects women’s experience. However, in the scientific debate about desire, we also see a disturbing example of selective explorations, interpretations and arguments that are intended to increase the likelihood that a specific set of the involved players’ values or particularistic goals will be realized in practice. Hopefully, outlining these goals and values will facilitate a critical evaluation of arguments regarding the pharmacologization of desire.

References

Aldridge, J. W. 2005. “Interpreting Correlation as Causation?” *Science* 308 (5724): 954–954. https://doi.org/10.1126/science.308.5724.954.

Anders, Sari M. van, Debby Herbenick, Lori A. Brotto, Emily A. Harris, and Sara B. Chadwick. 2021. “The Heteronormativity Theory of Low Sexual Desire in Women Partnered with Men.” *Archives of Sexual Behavior*, August. https://doi.org/10.1007/s10508-021-02100-x.

Anders, Sari M. van, and Neil V. Watson. 2006. “Social Neuroendocrinology: Effects of Social Contexts and Behaviors on Sex Steroids in Humans.” *Human Nature* 17 (2): 212–37. https://doi.org/10.1007/s12110-006-1018-7.

Arnow, B.A., L. Millheiser, A. Garrett, M. Lake Polan, G.H. Glover, K.R. Hill, A. Lightbody, et al. 2009. “Women with Hypoactive Sexual Desire Disorder Compared to Normal Females: A Functional Magnetic Resonance Imaging Study.” *Neuroscience* 158 (2): 484–502. https://doi.org/10.1016/j.neuroscience.2008.09.044.

Balon, Richard, and Anita H. Clayton. 2014. “Female Sexual Interest/Arousal Disorder: A Diagnosis Out of Thin Air.” *Archives of Sexual Behavior* 43 (7): 1227–29. https://doi.org/10.1007/s10508-013-0247-1.

Basson, Rosemary. 2000. “The Female Sexual Response: A Different Model.” *Journal of Sex & Marital Therapy* 26 (1): 51–65. https://doi.org/10.1080/009262300278641.

Bloemers, Jos, H. Steven Scholte, Kim van Rooij, Irwin Goldstein, Jeroen Gerritsen, Berend Olivier, and Adriaan Tuiten. 2014. “Reduced Gray Matter Volume and Increased White Matter Fractional Anisotropy in Women with Hypoactive Sexual Desire Disorder.” *The Journal of Sexual Medicine* 11 (3): 753–67. https://doi.org/10.1111/jsm.12410.

Brotto, Lori A., Johannes Bitzer, Ellen Laan, Sandra Leiblum, and Mijal Luria. 2010. “Women’s Sexual Desire and Arousal Disorders.” *The Journal of Sexual Medicine* 7 (1): 586–614. https://doi.org/10.1111/j.1743-6109.2009.01630.x.

Brotto, Lori A. 2017. “Evidence-Based Treatments for Low Sexual Desire in Women.” *Frontiers in Neuroendocrinology* 45 (April): 11–17. https://doi.org/10.1016/j.yfrne.2017.02.001.

Chańska, Weronika, and Katarzyna Grunt-Mejer. 2016. “The Unethical Use of Ethical Rhetoric: The Case of Flibanserin and Pharmacologisation of Female Sexual Desire.” *Journal of Medical Ethics* 42 (11): 701–4. https://doi.org/10.1136/medethics-2016-103473.

Chivers, Meredith L., Rosemary Basson, Lori A. Brotto, Cynthia A. Graham, and Kyle R. Stephenson. 2017. “Statistical and Epistemological Issues in the Evaluation of Treatment Efficacy of Pharmaceutical, Psychological, and Combination Treatments for Women’s Sexual Desire Difficulties.” *Journal of Sex & Marital Therapy* 43 (3): 210–17. https://doi.org/10.1080/0092623X.2016.1266538.

# Clayton, Anita. 2015. According to Science, Your Sex Drive Is Real. Available at: https://www.huffpost.com/entry/according-to-science-your\_b\_7279140

Clayton, Anita H, Stanley E Althof, Sheryl Kingsberg, Leonard R DeRogatis, Robin Kroll, Irwin Goldstein, Jed Kaminetsky, et al. 2016. “Bremelanotide for Female Sexual Dysfunctions in Premenopausal Women: A Randomized, Placebo-Controlled Dose-Finding Trial.” *Women’s Health* 12 (3): 325–37. https://doi.org/10.2217/whe-2016-0018.

Douglas, Heather. 2015. *Values in Science*. Edited by Paul Humphreys. Vol. 1. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199368815.013.28.

Even the Score. 2014. Even The Score, playlist available at https://www.youtube.com/channel/UCuA05Q18ixNS4rsBL19Ah1w/featured

Fahs, Breanne. 2014. “‘Freedom to’ and ‘Freedom from’: A New Vision for Sex-Positive Politics.” *Sexualities* 17 (3): 267–90. https://doi.org/10.1177/1363460713516334.

Frost, Rebecca, and Caroline Donovan. 2019. “A Qualitative Exploration of the Distress Experienced by Long-Term Heterosexual Couples When Women Have Low Sexual Desire.” *Sexual and Relationship Therapy*, January, 1–24. https://doi.org/10.1080/14681994.2018.1549360.

Goldstein, Irwin, James A. Simon, and Sharon J. Parish. 2016. “Appropriate Perspective and Context for Newly Approved Medications, Including Flibanserin.” *JAMA Internal Medicine* 176 (9): 1403. https://doi.org/10.1001/jamainternmed.2016.3883.

Graham, Cynthia A., Lori A. Brotto, and Kenneth J. Zucker. 2014. “Response to Balon and Clayton (2014): Female Sexual Interest/Arousal Disorder Is a Diagnosis More on Firm Ground than Thin Air.” *Archives of Sexual Behavior* 43 (7): 1231–34. https://doi.org/10.1007/s10508-013-0248-0.

Hogenmiller, Alycia, Alessandra Hirsch, and Adriane Fugh-Berman. 2017. "The Score is Even." *The Hastings Center*, retrieved from https://www.thehastingscenter.org/the-score-is-even/ (14.07.2017)

Kingsberg, Sharon. 2014. Dr. Sheryl Kingsberg: Explaining Hypoactive Sexual Desire Disorder. Available (23.08.2021): <https://www.youtube.com/watch?v=vzCGTftfIgI>

Klusmann, Dietrich. 2002. “Sexual Motivation and the Duration of Partnership.” *Archives of Sexual Behavior* 31 (3): 275–87. https://doi.org/10.1023/A:1015205020769.

Mark, Kristen P., and Julie A. Lasslo. 2018. “Maintaining Sexual Desire in Long-Term Relationships: A Systematic Review and Conceptual Model.” *The Journal of Sex Research* 55 (4–5): 563–81. https://doi.org/10.1080/00224499.2018.1437592.

Moynihan, R. 2014. “Evening the Score on Sex Drugs: Feminist Movement or Marketing Masquerade?” *BMJ* 349 (oct17 8): g6246–g6246. https://doi.org/10.1136/bmj.g6246.

Pearson, Cynthia (2019). The NWHN’s Statement on the FDA’s Approval of Vyleesi. Available: <https://nwhn.org/the-nwhns-statement-on-the-fdas-approval-of-vyleesi/> (28.07.2021)

Pyke, Robert E., and Anita H. Clayton. 2015. “Psychological Treatment Trials for Hypoactive Sexual Desire Disorder: A Sexual Medicine Critique and Perspective.” *The Journal of Sexual Medicine* 12 (12): 2451–58. https://doi.org/10.1111/jsm.13056.

Richgels, Patricia B. 1992. “Hypoactive Sexual Desire in Heterosexual Women:: A Feminist Analysis.” *Women & Therapy* 12 (1–2): 123–35. https://doi.org/10.1300/J015V12N01\_10.

Rosen, Raymond C., Jan L. Shifren, Brigitta U. Monz, Dawn M. Odom, Patricia A. Russo, and Catherine B. Johannes. 2009. “ORIGINAL RESEARCH—EPIDEMIOLOGY: Correlates of Sexually Related Personal Distress in Women with Low Sexual Desire.” *The Journal of Sexual Medicine* 6 (6): 1549–60. https://doi.org/10.1111/j.1743-6109.2009.01252.x.

Saadat, Seyed, Yunes Panahi, Milad Hosseinialhashemi, Ali Kabir, Khaled Rahmani, and Amirhossein Sahebkar. 2017. “Systematic Review and Meta-Analysis of Flibanserin’s Effects and Adverse Events in Women with Hypoactive Sexual Desire Disorder.” *Current Drug Metabolism* 18 (1): 78–85. https://doi.org/10.2174/1389200217666161026090333.

Segal, Judy Z. 2018. “Sex, Drugs, and Rhetoric: The Case of Flibanserin for ‘Female Sexual Dysfunction.’” *Social Studies of Science* 48 (4): 459–82. https://doi.org/10.1177/0306312718778802.

Simon, James A. 2018. “Future Developments and Research.” In *Textbook of Female Sexual Function and Dysfunction*, edited by Irwin Goldstein, Anita H. Clayton, Andrew T. Goldstein, Noel N. Kim, and Sheryl A. Kingsberg, 337–48. Chichester, UK: John Wiley & Sons, Ltd. https://doi.org/10.1002/9781119266136.ch23.

Spielmans, Glen I. 2021. “Re-Analyzing Phase III Bremelanotide Trials for ‘Hypoactive Sexual Desire Disorder’ in Women.” *The Journal of Sex Research*, March, 1–21. https://doi.org/10.1080/00224499.2021.1885601.

Traeen, Bente. 2008. “When Sex Becomes a Duty.” *Sexual and Relationship Therapy* 23 (1): 61–84. https://doi.org/10.1080/14681990701724758.

Wood, Jill M., Phyllis Kernoff Mansfield, and Patricia Barthalow Koch. 2007. “Negotiating Sexual Agency: Postmenopausal Women’s Meaning and Experience of Sexual Desire.” *Qualitative Health Research* 17 (2): 189–200. https://doi.org/10.1177/1049732306297415.

Woodard, Terri L., Nicole T. Nowak, Richard Balon, Manuel Tancer, and Michael P. Diamond. 2013. “Brain Activation Patterns in Women with Acquired Hypoactive Sexual Desire Disorder and Women with Normal Sexual Function: A Cross-Sectional Pilot Study.” *Fertility and Sterility* 100 (4): 1068-1076.e5. https://doi.org/10.1016/j.fertnstert.2013.05.041.