Editorial: Refocusing on Inclusion

Marianne Trevorrow,[1] MA, ND

This edition will be published on the first anniversary of our digital transition, two and a half years into the COVID-19 pandemic. While many of our practices and social lives are returning to a new kind of normal (including mask wearing at work and indoor public settings), as of yet, there still seems to be no clear pathway towards saying the pandemic is well and truly over. We are also hearing warnings from the Public Health Agency of Canada (PHAC) and provincial Public Health agencies to be mindful of a 7th—and potentially an 8th—wave of infections later this fall, driven by sub-variants of COVID-Omicron.

What is also becoming apparent is that our public healthcare system is in crisis. Our patients are dealing with backlogs for surgeries, diagnostic testing, specialty or even primary medical care, and patients are increasingly feeling abandoned, as many family physicians are leaving practice either to retire or due to burnout.

This situation should be calling out for increased awareness of naturopathic doctors and the need for our services to support these gaps in the public system. However, while many private benefit providers and government departments are recognizing the value of our care with increased coverage (including, most recently Veteran Affairs Canada), it seems that movement on many crucial scope expansion issues is mired in provincial health bureaucracies, which are scrambling to manage fallout from years of underfunding and added costs associated with the COVID pandemic.

Still, at *CANDJ*, we continue to encourage public engagement, such as supporting CAND's "Better Health, Together" communication strategy, and with social media support for CAND on multiple platforms. Recently, your *CANDJ* editor was accepted for a year-long planetary health leadership course with the Canadian Association of Physicians for the Environment (CAPE) and will be working to build partnerships with other regulated healthcare providers on issues regarding health and environmental advocacy.

Another project we have been working on over the past few months, and which we are unveiling with this issue, is an update of our author submission and citation guidelines to include recognition, at a fundamental level, of the respectful use of traditional Indigenous medicines, Knowledge Keepers, and ways of knowing that underlie much of our naturopathic therapeutics. While their editorial will describe this project in greater depth, I'd like to recognize how deeply grateful we were for the thoughtful commentary and discussions on this project by colleagues Nicole Redvers, Johanne McCarthy, Jamie van Erkelens, and Sarah Connors, and of course the crucial coordinating work of our Associate Editor, Cyndi Gilbert. This truly is a step forward for our publication, and for the profession in North America.

In our Commentary section, we have an article discussing a recent controversy in Washington State over regulatory changes to their continuing education requirements to specify naturopathic association–supported content. From this vantage point, and a poll they carried out of with their members in 2020, they argue for a larger discussion around conflicts of interest (COIs) in ND professional continuing education. As our readers know, *CANDJ* adopted strict International Committee of Medical Journal Editors' (ICMJE) competing disclosure standards for all of our submissions in 2019; nevertheless, we are encouraged to see these discussions taken up across the profession. We think it is a conversation whose time has definitely come.

Our second commentary is a thought-provoking examination of a social science "multiple-models" approach for teaching naturopathic therapeutics in undergraduate clinical education. As the author points out, the various lenses of naturopathic medicine (evidence-based, Traditional and Complementary Medicine, or Vitalistic) need not be considered in exclusion of one another, but each can be taught as having its own particular strengths, weaknesses, and biases. In many ways, we think that having cognitive flexibility, critical thinking, and tolerance for ambiguity in practice is one of the great strengths of the naturopathic approach, especially as we integrate more into conventional health settings.

Rounding out this edition is a fascinating case study on female sexual dysfunction in a young adult patient from a student/faculty team at the Canadian College of Naturopathic Medicine (CCNM) that will highlight the use of such a "multiple models" approach in clinical practice. It also offers thoughts about appropriate clinical

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communication around the sensitive topic of human sexuality and trauma-informed practice.

Once again, we hope you enjoy another lively edition of *CANDJ* and engage with our publication as we grow and evolve.

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

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This research did not receive any funding.

Reconciliation and Publication Standards at CANDJ

Cyndi Gilbert,[1,2] ND, **Johanne McCarthy,**[3,4,5] ND, MA, **Nicole Redvers,**[6,7] ND, MPH, **Jamie van Erkelens,**[8] MD, PhD, **Sarah Connors,**[9] ND, and **Marianne Trevorrow,**[1] ND, MA

Over the past year, *CANDJ* has accomplished many goals for a small, naturopathic professional association journal. We moved to an online Open Journal Systems (OJS) platform and are now indexed by Google Scholar, Crossref, and EBSCO. Setting our priorities for the coming year, the Editorial Team reflected on the journal's standards and how they could better reflect our commitment to reconciliation with Indigenous Peoples. As a naturopathic journal encouraging submissions on topics related to traditional and complementary medicine, planetary health, and health equity, we believed it was imperative to ensure that our publication standards clearly aligned with our commitment to the Truth and Reconciliation Commission's (TRC's) Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and to challenge colonial structures of academic credibility and knowledge formation.[1,2]

A small handful of academic journals have enacted processes for highlighting the Indigenous cultural identity of authors and instituted ethical considerations and criteria for publishing content concerning Indigenous communities.[3-7] Likewise, some educational institutions in Canada have adopted research standards in accordance with the Tri-Council Policy Statement (TCPS 2) Chapter 9 and the First Nations Principles of OCAP® (ownership, control, access, and possession).[8-12] However, few academic journals outside of the field of Indigenous Studies have incorporated these guidelines into their publishing standards.[3,5-7,13] To our knowledge, *CANDJ* is the first naturopathic journal worldwide to adopt editorial policies that recognize the inherent rights of self-determination of Indigenous Peoples.

As *CANDJ*'s Editor-In-Chief and Associate Editor are both non-Indigenous, they began at the beginning, by reaching out to respected Indigenous colleagues, committed to a process based on the principle of "nothing about Indigenous Peoples, without Indigenous Peoples." We included an open invitation and had many conversations, creating space for Indigenous naturopathic doctors and research ethics scholars to lead the process, premised on values of respect, transparency, and a commitment to developing guidelines in keeping with Indigenous worldviews, ontology, and epistemologies. Our process was also consistent with our understanding of reconciliation as the "ongoing process of establishing and maintaining respectful relationships…and following through with concrete actions that demonstrate real societal change," as defined by the TRC.[1]

Our revisions are comprehensive and substantial, addressing standards for blinding, authorship, author affiliations, permissions, citing Indigenous Elders, style, ethics regarding Indigenous content, rights of Indigenous authors and communities, and publication access. Indigenous authors are encouraged to list their Indigenous cultural identity in our author affiliations in addition to, or in place of, institutional affiliation. All *CANDJ* submissions involving and/or concerning Indigenous Peoples, communities, identities, language, history, practices, Traditional Knowledge, Oral Traditions, cultural information, heritage, artefacts, and/or Protocols, as well as research conducted on Indigenous Peoples' or Indigenous Nations' lands, must include Indigenous authors and/or show evidence of appropriate collaboration/consultation and consent; be relevant to and elevate Indigenous communities and Peoples; and respect the ownership rights of Indigenous Knowledge. Style guidelines will generally follow best practices described in *Elements of Indigenous style: a guide for writing by and about Indigenous Peoples*.[14]

Some readers may ask why the journal has set requirements, review processes, permissions, and copyright guidelines that differ between Indigenous and non-Indigenous authors. Article 31 of the UNDRIP stresses that "Indigenous Peoples have the right to maintain, control, protect, and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures."[2] Likewise, Article 23 specifies "the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions."[2]

We also invite our members to consider *CANDJ*'s policies and standards much like the Two Row Wampum Treaty, one of the oldest treaty relationships between the Haudenosaunee and the settlers on Turtle Island. The Two Row Wampum represents the canoe of the Indigenous Peoples and the ship of the settlers, traveling alongside each other, independently but in mutual support of

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each other in a relationship of peace, friendship, and respect. Our author guidelines also aspire to embody the principles of Two-Eyed Seeing (*Etuaptmumk*), which Mi'kmaq Elders Murdena and Albert Marshall describe as a wholistic view of the world that weaves settler and Indigenous perspectives back and forth, and together.[15,16] While Indigenous Peoples have long had to "walk in two worlds,"[15] we encourage our non-Indigenous researchers, authors, and readers to also develop Two-Eyed Seeing, benefitting from co-learning and an understanding that draws from the strengths of both settler and Indigenous knowledges and ways of knowing.[15-17]

We hope that *CANDJ*'s updated policies and standards represent the journal's ongoing commitment to support healthy relationships with Indigenous Peoples. Striving to be leaders within naturopathic medicine, we aspire to model a mindfulness of our relationships on Turtle Island, maintain a pledge to care for everyone, and uphold the commitments as signatories of the Two Row Wampum Treaty.

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We have read and understood the *CAND Journal*'s policy on conflicts of interest and declare following conflicts: after submission of the revised guidelines and this editorial, JM, NR, JvE, and SC were offered a CAND membership for one year, or the equivalent donation to the charity of their choice, as a gift in recognition of their participation.

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Report from the Chair

Mark Fontes, ND

Preamble

The following report was presented by CAND Chair, Dr. Mark Fontes, ND, at the Canadian Association of Naturopathic Doctors Annual General Meeting, June 18, 2022.

Report from the Chair

Dr. Mark Fontes, ND, CAND Chair

On behalf of the CAND Board of Directors and staff, I am pleased to provide our membership with a summary of the work we did on behalf of the profession in 2021 and our plans going forward. It has been an honour to be on the CAND board for the past eight years, with the last three as Chair. I would once again like to thank all past board members of the CAND, as you have helped lay the solid foundation we are able to work on today.

Your current CAND Board of Directors consists of naturopathic doctors from across Canada—British Columbia, Alberta, Ontario, New Brunswick, and Nova Scotia. At the AGM last year, we re-elected two current board members to another three-year term. There were no additions to the board. We have had some changes in CAND staff and board members in the past year.

In 2021, and as noted at last year's AGM, after 30 years working for the naturopathic profession, Heather Fleck retired. We also shared, in March of this year, that Stuart Watson resigned from his position due to ongoing health issues. We once again thank Heather and Stuart for their many years of excellent work and service to the CAND. I would also like to share that Dr. Sandra Murphy, ND, and Dr. Rigobert Kefferputz, ND, have left the CAND board to pursue other interests. We are very thankful for their hard work and dedication to the CAND and to the profession in their roles. Thank you, Dr. Murphy and Dr. Kefferputz, on behalf of the profession!

At today's meeting, we have four current board members standing for re-election and we will be electing one new Board Director to fill a vacancy. The CAND is committed to diverse representation on its Board, and I encourage those of you interested in being a part of the positive change and forward movement of the profession to consider applying to join the CAND board— or your Provincial/Territorial association board when positions become available.

I am pleased to report that the CAND membership numbers stayed strong in 2021 with 2280 members.

The CAND also remains in a healthy financial position, as we will present at the AGM. In terms of both professional membership revenues and corporate partner revenues, we met or exceeded our 2021 budget projections while reducing our overall expenses.

2021 was in many ways a year of transition. Although significant focus and work with government continued with regard to COVID-19, we were able to revisit and work on the goals and objectives we had as a board prior to the start of the pandemic. We noted many of you returning to your clinics for in-person care and patients also requesting and wanting that type of care. Throughout 2021, the CAND Board of Directors continued to meet every six weeks and held two virtual planning sessions to continue to work on our core customer groups.

We recognize the importance to our members of consistent messaging and highlighting work the CAND is doing to improve the recognition of naturopathic medicine on a national level and with the federal government. Details of our work at the federal level are outlined in the Government Relations report and will be presented during the AGM. In addition to this important work, the focus of the past year has been on highlighting the advantages of membership in the CAND, increasing membership, providing support and input to our "Better Health, Together" campaign, and helping to improve the CAND website content.

In terms of our student membership portfolio, we continue to strategize on how we can best engage with and serve our student members. As a profession, we have a stronger voice when we have more members. This past year, our focus has been on increasing student awareness of the CAND's engagement with government and the work we do, as well as working on increasing student membership numbers at CCNM Toronto campus.

The CAND continues to support and evolve the relationships with our corporate partners. We thank all of them for their continued support of the CAND and of the profession, which ensures that we can continue to do the work that we have set out as priorities.

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Naturopathic Medicine Week (NMW) is our opportunity to spread the news about naturopathic doctors, how they help their patients, and the benefits of naturopathic medicine. NMW 2021 was a great success, with content viewed 1.1 million times by more than 250,000 Canadians who engaged with it thousands of times. The engagement rate was 4.16%, twice the industry average. The hashtag NatMedWeek2021 was the most widely used hashtag across all platforms while #BetterHealthTogether was popular among NDs and ND Associations. Amplifying the organic CAND NMW content pushed messages to over 200,000 people over 750,000 times. Early data for NMW 2022 indicates this year's awareness week has been even more successful.

2021 was an exciting year for CAND publications, as the *Vital Link* moved online and became the *CAND Journal* (CANDJ). The journal now has its own website as an online, indexed, peer-reviewed journal. With a public-facing Web page and free member access, the *CAND Journal* will serve to educate naturopathic doctors and integrative health professionals in Canada and globally on evidence-informed care and the art of naturopathic best practices.

Another one of our core customer groups is insurance companies. The CAND is recognized as the "go to" organization for information on the education and training of naturopathic doctors, regularly contacted to verify credentials and scope of practice. Feedback from various insurance companies indicates that they reference our website regularly and find both the search engine and the information on the site very helpful. Regular emails and calls to the CAND office help the insurance companies understand who is and is not a qualified ND, what comprises the scope of practice, and the regulation of the profession in the various jurisdictions. Once again, the CAND attended the annual Canada Life and Health Insurance Association (CLHIA) conference in 2021. The conference was virtual, and the CAND hosted an exhibit meeting room, which was well attended by delegates.

In addition to our core customer groups, we acknowledge the importance of working with all provinces and territories across Canada, as well as our colleagues in the United States and elsewhere in the world via the World Naturopathic Federation (WNF). I would like to thank all the Provincial/Territorial Associations, the Canadian School, and affiliate organizations—CNME, NABNE/NPLEX, WNF, and the AANMC—for their work on behalf of our profession in the past year. I look forward to continuing our work together.

Lastly, and most importantly, on behalf of the CAND and our Board of Directors, thank you to all of our members. It is your commitment to the CAND that allows the CAND Board of Directors and staff to work on your behalf, and advocate for the profession. The CAND Board of Directors looks forward to continuing to support you, improve awareness of naturopathic medicine, and represent the profession at the national level.

Postscript

During the AGM, NDs Jatish Kaler, Tara Lantz, Renée Purdy, and Mitchell Zeifman were elected for another three-year term and Dr. Valerie Penton-Power, ND, was elected as a new CAND Board Director.

The full Annual Report is posted for members on the Members Portal of the CAND website www.cand.ca

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Dr. Mark Fontes, ND, is Chair of the Canadian Association of Naturopathic Doctors.

Contested Continuing Education Changes in Washington State Highlight Problems within the Naturopathic Doctoral (ND) Profession

Shannon Hirst,[1] ND, and **Traci Pantuso,**[2] ND, MS

Recently, the Board of Naturopathy (BON) in Washington State (WA) updated the continuing education (CE) requirements for WA Naturopathic (ND) license renewal. The requirements went from 20 credits per year to 60 credits every two years, with 15 being pharmacology content[1] (Table 1). These changes to the CE requirements for license renewal in Washington State have created quite a commotion.

At face value, it appears this increase in CE is a routine update for a state where NDs have a primary care scope of practice that includes prescriptive rights, routine conventional diagnostic tests, and some conventional interventions.[1] However, a unique stipulation of these 60 credits is that 20 (33%) of them must be satisfied through content approved by a select few naturopathic organizations chosen by the BON.[1] These 20 credits were assigned their own category, called Category 1[1] (Table 1). The ND organizations designated to approve these credits are the American Association of Naturopathic Physicians (AANP), its state affiliate, the Washington Association of Naturopathic Physicians (WANP), the North American Naturopathic Continuing Education Accreditation Council (NANCEAC), and the Accredited Naturopathic Medical Schools.[1] There has been significant pushback against requiring naturopathic CE hours, and active attempts to amend this rule have now entered their second year. At the time of writing, they remain unresolved. The authors believe this ongoing debate is of interest to the entire ND profession, and this commentary is intended to inform and promote discourse among the international naturopathic community regarding issues of policy, scope of practice, and professional integrity.

Washington State was one of the first states to regulate naturopaths, and it is served by its own BON. The BON is an authority within WA's Department of Health that regulates the safety and competency of NDs in the state. It is made up of four naturopaths and two members of the public. The BON has been working on updating the CE requirements for a number of years. In response to the CE updates, licensees raised concerns with the BON about the content and quality of CE that is necessary to practice with a primary care scope of practice and the ability for Category 1 naturopathic CE to efficiently fulfill these needs. The primary care scope of practice in WA state for NDs includes routine diagnostic and treatment interventions,[2] in contrast to the more specialized scope of practice for Canadian NDs.[3] The BON responded in a letter with the following statement: "the Board feels strongly that naturopathic accrediting organizations are the best means to ensure substantiation of naturopathic principles in continuing education content. Without such affirmation, the practice of naturopathic medicine is at risk of erosion of the very fundamentals that set it apart from allopathic doctrine" (Chad Achstgen, ND, Chair, Board of Naturopathy, State of Washington Department of Health, letter, March 19, 2021).

After the BON made its position clear, WA ND licensees were surveyed through Survey Monkey regarding practice and CE preferences to provide data to the BON. The survey allowed open-ended responses to the BON assertion that mandating naturopathic CE would inhibit erosion of the naturopathic profession.[4] The results of the survey demonstrated that 91.2% of the 125 ND survey respondents are providing primary care services to their patients, that they generally approve of increasing CE credits for licensure and agree with conventional definitions of primary care, and that they participate in a wide array of CE courses that include both conventional and naturopathic content.[4] The majority of respondents, however, remain opposed to the Category 1 requirement and expressed concerns specifically over the BON statement that the profession is at risk without it.[4] A rebuttal letter with over 100 licensee signatures was sent to the BON subsequent to the survey urging the BON to reconsider its position.

The question these survey results bring up is this: how is it that naturopathic licensees are both making use of naturopathic CE and also deeply opposed to requiring it? As unique providers in a greater healthcare system, it might be logical to ask under what circumstances CE specific to that unique field would not be

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TABLE 1 Continuing education requirements for Washington State Naturopathic Doctors (ND) prior to 2021 and from 2021 onward.

Time period	Category	Hours Required	Maximum Hours Allowed	Accreditor
Prior to 2021	No Categories—only diagnosis and therapeutics in RCW 18.36A.040 shall be eligible for credit.	20/year	No maximum	None Required
As of 2021	1	20/2 years	60	AANP,[a] WANP,[b] NANCEAC,[c] ND Schools.
	2	0–40/2 years	40	Accredited entity, nationally recognized (ACCME,[d] ANCC,[e] ACPE[f])
	3	0	5	None required
	Pharmacology	15/2 years		Same as Category 1 and Category 2 accreditors

RCW = Revised Code of Washington.
[a] American Association of Naturopathic Physicians
[b] Washington Association of Naturopathic Physicians
[c] North American Naturopathic Continuing Education Accreditation Council
[d] Accreditation Council for Continuing Medical Education
[e] American Nurses Credentialing Center
[g] Accreditation Council for Pharmacy Education

required? Valid concerns were raised about the limited catalogue of CE offerings compared with conventional content on multiple platforms and the equitable pricing of naturopathic materials. Many licensees also pointed to the static nature of naturopathy due to lack of field-specific research. However, the authors believe that the primary care scope of practice status of WA licensees, with the clear legal and ethical responsibilities such status carries, is the source of the fundamental resistance.

In addition, the authors believe that the field of naturopathic care is indeed at risk of erosion, but not due to WA NDs not being required to take 20 CE units from naturopathic-approved organizations. After much thought and deliberation, the authors have come to the conclusion that the real threat to the profession is the ongoing failure to fully address potential field-specific conflicts of interest (COI). This has created a breakdown of trust within the profession itself. "The central goal of conflict-of-interest policies in medicine is to protect the integrity of professional judgment and to preserve public trust…"[5] Without consensus on a patient-centred, preventive ethical structure in naturopathic medicine, there is a lack of a reassuring standard for the professional integrity of naturopathic CE materials. The authors would go a step further and suggest that an additional goal of COI policies is preserving trust within the profession itself.[5] While most people are familiar with this concept as it relates to financial conflicts, as they are the most responsive to regulation, a conflict can really arise from any interest, legitimate or improper, that impacts the primary interest of providers when they are in their professional role.[5,7]

In conventional medicine, primary interests are clearly declared in altruistic terms such as patient welfare or scientific integrity.[5,7] In contrast, the recently released World Naturopathic Federation Health Technology Assessment for naturopathy describes the profession as defined by philosophies, principles, and theories.[8] Patient welfare as a primary interest is not overtly declared or expanded upon beyond the naturopathic principles. This omission creates vulnerability to COI in naturopathy—vulnerabilities both shared with the greater healthcare community and those unique to the field. Examples of additional unique COI vulnerabilities in naturopathy include lack of consensus on naturopathic standards of care, substantial student loan debt in the context of a primarily entrepreneurial profession within healthcare,[9] and a general lack of field-specific research.[8] Even the financial investments in naturopathy are unique, coming from sources such as supplement companies, manufacturers of alternative laboratory tests, and compounding pharmacies, all of which have varying levels of outside regulation or research and few established boundaries for their involvement in educational materials.

In the absence of well-established ethical structures and ND-specific standards of care, it is difficult to ascertain the degree to which any number of these interests could shape CE content, and in what ways. It is easy to see where NDs with primary care scope of practice and shared legal and ethical interests with conventional medicine would find themselves reluctant to be required to navigate this landscape in its current form.

Ethics and underlying COI frameworks exist to reinforce the altruistic root of the conventional medical profession, where significant resources have been invested into developing consensus.[5] They form the consistent backbone for conventional policy decisions in regulation, education (including CE), and professional conduct.[5] The field of naturopathic medicine has not yet undergone the same self-reflective process as conventional medicine of declaring its purpose and ethical tenets in relationship to the public. Naturopathic medicine is unique, but it has not yet defined itself beyond its principles and theories, unlike conventional medicine. This is a serious, unfinished, issue that impacts not just CE but the sustainability of naturopathy as a whole. It is surmountable, however, and represents a profound opportunity for the profession to invest intellectual labour in developing an ethical framework for itself that is unique, preventive, and patient-centred—all concepts that naturopathy has hoped to espouse. It would be no small undertaking, but in committing itself to the process of declaring fundamental ethical tenets, the field would be offering a promise of significant goodwill to both the public and those within the profession itself.

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A Case for Using a Guided Multiple-Models Approach to Address Philosophical Tensions in Naturopathic Medicine

Cindy Beernink,[1] MEd

THE CHALLENGE

Both in day-to-day clinical practice and in how the profession is regulated and evolves, naturopathic medicine is grappling with ontological and epistemological tensions. These conflicts arise from different views of what constitutes truth, evidence, and even what can be known. These varying approaches are often described as falling on a spectrum with the opposing views of vitalism/energy-based medicine at one pole and evidence-based medicine (EBM) at the other. These tensions manifest in debates about what constitutes good/ethical medical practice, teaching, and learning; how to preserve the naturopathic traditions and approaches that distinguish practitioners from other healthcare professions; and how to protect and promote the credibility and legitimacy of the profession.

Sometimes the first step to finding alternatives is to step away from the problem to search for analogous problems and solutions.

The Multiple-Models Approach

In today's information era, many different areas of human endeavour (business, engineering, sociology, policy, education, and so on) are awash in data.[1] Often, the problem isn't that people working in these various fields are lacking data to inform their choices but lies, rather, in managing and prioritizing data for effective decision-making.[1] Databases are abundant, but these only help contain and organize information—alone, they cannot be used to appropriately interpret the data. Moreover, the interactions between various factors and agents within a given system are often complex (rather than linear).[1] Thus, the information age has raised the importance of (data) models.[1] Dr. Scott E. Page, PhD, author of *The Model Thinker*, writes: "Organizing and interpreting data with models has become a core competency for business strategists, urban planners, economists, medical professionals, engineers, actuaries and environmental scientists, among others."[1]

For the purposes of this article, a model is defined as a system, structure, or approach that helps explain, interpret, and predict data. There are models to interpret economic data, such as housing starts and unemployment numbers; there are meteorological models to analyze factors such as temperature, humidity, and atmospheric pressure; and there are psychological models that help us understand human behaviours and interrelationships. Data are not just numbers—they are information of all kinds. Whether explicitly or implicitly, all models are informed by theory or philosophy.

According to Page, models have three shared traits:

1. They simplify through prioritizing and extracting data so unnecessary information is eliminated
2. They help codify a system so data can be used in a logical fashion to understand, predict, and problem-solve
3. They are all wrong—by simplifying or prioritizing/deprioritizing/interpreting information, all models are fallible and limited. None is fail-safe.[1]

The third characteristic seems like a good reason to reject the use of models, but the inundation and complexity of data means that models are here to stay. The solution, Page writes, is to use multiple models:

> As powerful as single models can be, a collection of models accomplishes even more. With many models, we avoid the narrowness inherent in each individual model. A multiple-models approach illuminates each component model's blind spots […] With multiple models, we build logical understandings with multiple processes. We see how causal processes overlap and interact. We create the possibility of making sense of the complexity that characterizes our economic, political, and social worlds [...].
>
> To rely on a single model is hubris. It invites disaster […]. We need many models to make sense of complex systems […]. By definition, complex phenomena are difficult to explain, evolve, or predict […]. When taking

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> actions, wise people apply multiple models like a doctor's set of diagnostic tests. They use models to rule out some actions and privilege others. Wise people and teams construct a dialogue across models, exploring their overlaps and differences.[1]

A multiple-models approach, Page argues, provides different perspectives on the same phenomena, providing deep insights and nuanced, rich understandings.[1]

Voices in medicine and medical education echo this argument. Dr. Paul Thomas, MD, writes: "Different kinds of lenses or questions produce different kinds of truth or answers [...]. Each insight is valuable, but none captures it all. Together the insights reveal a fuller, moving picture."[2] In *The challenge of evidence in clinical medicine*, Dr. Mark Tonelli, MD, asserts, "Expert clinicians must utilize a variety of reasons and methods of reasoning in arriving at the best clinical decision or recommendation for an individual patient."[3]

The Multiple-Models Approach and Naturopathic Medicine

Evidence-based medicine and vitalism within naturopathic medicine are mega-models, meaning each is a collection of models. Each mega-model is founded on a different philosophy or set of theories. Naturopathic medicine has been arguing about the supremacy of one mega-model over the others. However, each approach has its blind spots and weaknesses.

In the field, a large component of the naturopathic profession is practicing what could be described as a multiple-models approach. These naturopathic doctors (NDs) are informed by EBM-produced research where it is available and where they judge it to be applicable to their patients, and they also use other models from the eclectic approach as they deem it to be suitable and effective. Yet this approach generates much tension within the profession, with some seemingly intractable and opposing stances.

Part of the problem is the mistaken belief that the various models used by NDs have to be congruent or even integrated with each other. While every field of study strives to find truth, there isn't a single way to find it. Eastern, Indigenous, and Western philosophies, as an obvious example, are radically different. None can be explained through or encompassed by the other, yet each brings insights that the other cannot.

On the other hand, as professionals and human beings, we need some agreement on truth. We cannot define, teach, measure, or offer competence if all truth is considered relative and all models considered equal at all times and in all circumstances.

So how can the profession move forward? The following suggestions may be ways to move beyond the current impasse:

Embrace a multiple-models approach. This involves:

a. Acknowledging and teaching the shortcomings and biases inherent in all our models, as well as their relative strengths. This moves practitioners and students away from dogma and toward humility and curiosity.

b. Teaching how to use various models and when to switch. This involves cognitive flexibility and some guiding principles, such as:

   i. Risk and benefit: What are the relative risks/benefits of using one model/approach over another? What is the relative benefit or cost to the patient, to the public, or to the reputation of the profession for each approach?
   ii. Evidence or probability: What is the best evidence we have from each of the available and appropriate paradigms?
   iii. Complexity, holism, and individual responses: With increased complexity, there are increased risks but also possibly increased benefits. A student and a practitioner must be trained to appreciate and work within complex systems and not see matters (or living systems) as simple or black-and-white when they are not.
   iv. Reasonableness: the above three principles must be reasonably applied without dogma or biases/cognitive errors such as slippery-slope thinking.

c. Developing tolerance for ambiguity. Our understanding of the world and medicine is always subject to change as a result of new discoveries. However, NDs can still develop guidelines for patient care, provided that the training is also in place for practitioners to judge when it is reasonable or required to deviate from these standards. NDs must be confident, effective, and decisive in matters that are within the scope of the profession, even as they are humbly aware of the limits of their knowledge and experience.

How could this be applied, practically speaking? Take the example of a patient who is debating undergoing a course of treatment that has been associated with great reductions of death and suffering around the world, but there are also allegations and theories that this treatment may cause harm to vulnerable individuals or negatively impact human health in other ways (this could be vaccines or antibiotics, both of which may be beyond the scope of NDs but still within their sphere of patient influence). The ND must consider the relative risk to both the patient and the public, the current evidence available and the relative strength of the data, and what is reasonable. Unless there are indications that a particular patient may be vulnerable to side-effects of this treatment, the ND's recommended treatment would be informed by the preponderance of evidence, the significant potential benefit, and the relatively low risk of harm (with acknowledgement of the potential risks and unknowns).

On the other hand, if the patient's concern was an issue that did not have immediate significant risk/cost to the individual or the public, other models may be considered equivalent and therefore valid avenues to explore. However, even in this case, there are limits applied by reasonableness: a patient cannot be asked or expected to return for appointment after appointment—or to pay for expensive forms of treatment—if there is not significant improvement within a reasonable time. Standards

of care and guidelines for what would be considered reasonable can be developed if there is sufficient support for the multiple-models approach.

CONCLUSION

Naturopathic medicine is not the only discipline that struggles with different ontologies and epistemologies or theories of what can be known and what constitutes valid evidence. However, other disciplines *do* accept that different models (systems, structures, or approaches that help explain, interpret, and predict data) are appropriate; they may debate which one may be used appropriately in which circumstances, but this can be a productive debate. It is time that the naturopathic profession move beyond ideological purity and be honest about what it can reasonably know with any given model (or modality) available.

Respecting that different models may offer valuable insights into a large and complex reality that no single model alone can fully represent, naturopathic medicine can embrace a multiple-model approach and collectively develop/endorse guidelines that help guide learners and educators in the wise and reasonable use of these models.

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

Jessica Nazareth[1] and **Cyndi Gilbert**[1]

ABSTRACT

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

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

INTRODUCTION

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

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

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

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Case Presentation

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

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

Medical History, Medications, Natural Health Products

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

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

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

Biopsychosocial Determinants of Health

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

She played hockey for stress relief, but at times it interfered with her sleep schedule. She also enjoyed running and weight training, both of which improved her mental health. She slept approximately 9 hours a night but described challenges falling asleep and staying asleep. When stress was heightened, she would have up to 8 awakenings throughout the night. The patient was generally fully nourished, with counselling provided regarding adequate intake of protein and vitamin/mineral-rich foods. She reported regular menstrual cycles of 28–32 days.

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

Diagnosis

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

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

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

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

TSH = thyroid stimulating hormone;
RBC = red blood cell;
HbA1c = Hemoglobin A1c.

Therapeutic Management

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

Natural Health Products and Medications

L-theanine (100 mg prn/before sex up to 500 mg total qd), *Panax ginseng* (500 mg qd), and *Rhodiola rosea* (200 mg qd) were initiated at the first visit. On October 5, she reported feeling more relaxed during sex and that sex was more enjoyable. Vitamin D3 was added to the treatment plan, at a dosage of 5000 IU qd for 3 months to correct for possible deficiency. Although baseline serum testing was recommended, the patient opted to supplement without results due to the cost of lab tests.

Counselling, Sexual Education, and Sex-Specific Recommendations

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

TABLE 2 Summary of naturopathic treatments and patient-reported outcomes

Date of Visit	Recommended NHPs/Drugs/ Treatments	Lifestyle & Counselling Recommendations	Patient-Reported Outcomes
September 28, 2021	– L-theanine, 100 mg prn – *Panax ginseng*, 500 mg qd – *Rhodiola rosea* Extract, 200 mg qd	– Increase non-sexual intimacy with partner – Diaphragmatic breathing 2-3 times daily – Increase water intake to 2 L qd	
October 5, 2021	– Vitamin D3, 5000 IU qd	– Book (*Come as You Are*, Emily Nagoski Ph.D.) – Journaling – Sleep hygiene education	– Improvements in stress, sexual functioning, and enjoyment during sex
October 26, 2021	– Discontinue *Panax ginseng* – Continue with other treatments as previously recommended	– Education about erogenous zones, self-pleasure / self-discovery, mindset around sex – Journaling	– Sexual arousal and desire significantly improved – Night sweats, which resolved after discontinuation of Rhodiola and ginseng
November 9, 2021	– Discontinue *Rhodiola* during menses if experiencing night sweats	– General dietary guidelines (increasing vegetables, fibre, and healthy fat consumption) – Co-stimulation of multiple erogenous zones during partnered sex – Self-care strategies – Patient started counselling with sister	– Night sweats improved, except around menses – Continued improvement in sexual desire and initiation of sex – Increase in vaginal lubrication and sexual responses – Decreased reliance on melatonin
December 7, 2021		– Mindfulness-based strategies after work due to stress response – Referred to doctor to discuss tapering escitalopram	– Improved sexual arousal, satisfaction, and vaginal lubrication – Engaging in sex more frequently – Fluctuating anxiety due to work stressors
December 21, 2021	– Multi-strain probiotic (50 billion colony forming units), 1 capsule qd	– Restarted pelvic floor exercises	– Dyspareunia present but improved – Continued improvement in desire and arousal
January 18, 2022	– Fish oil (1330 mg EPA, 266 mg DHA per capsule), 2 capsules qd – Lavender essential oil to diffuse	– Acupressure: Heart 7, Kidney 3, Pericardium 6	– Reported first orgasm (Jan 9, 2022) – Dyspareunia well-managed – Irritability since reducing escitalopram to 5 mg qd (Jan 11, 2022) – Anxiety heightened due to work and stress
February 8, 2022	– Chamomile, lavender, and lemon balm tea, 1 cup qd	– Discussed reducing exposure to stressors	– Dyspareunia, sexual desire and arousal remained improved – Anxiety continued to be heightened – Patient reported having low adherence to recommendations over the month of January
February 22, 2022	– B-complex + L-theanine, 1 capsule bid	– Thought record completed during visit	– Anxiety managed well with more consistent use of recommendations
March 22, 2022	– Reduced vitamin D3 to 2500 IU qd	– Pelvic floor massage based on guidance from pelvic physiotherapist (1/biweekly)	– Improved mood and anxiety – Consistent improvements with sexual arousal and desire – Continued ability to achieve orgasm

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

therapies (e.g., meditation, journaling),[22] and scheduled time for self-care after engaging with family members or after a busy workday. Resources were provided, including the sexual temperament questionnaire (adapted and abbreviated from the Sexual Excitation/Sexual Inhibition Inventory for Women), touch exploration activity (to discover locations and types of touch she liked/disliked), and the book *Come as You Are* (Emily Nagoski, PhD). A water-based lubricant free of glycerin and fragrances[23] was recommended to help relieve pain during sex. Self-pleasure was recommended. She was also encouraged to increase the diversity of sexual activities beyond receptive penile–vaginal intercourse, and to engage in multiple-stimulatory sexual activities (e.g., both clitoral and penetrative stimulation).

Patient Outcomes and Treatment Plan Changes

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

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

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

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

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

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

DISCUSSION

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

There is limited research on specific naturopathic tools and NHPs for the management of FSD. Limited studies to date on L-arginine, ginseng, ginkgo, maca, and acupuncture have shown some improvements in different areas of sexual functioning.[11] There are small studies that show both an association between FSD and vitamin D deficiency[24] and others that support the use of Vitamin D supplementation to improve Female Sexual Functioning Index (FSFI) scores.[25] *Rhodiola rosea*, an herb traditionally used as an adaptogen to improve the body's response to physical and mental stress, has been studied for its effectiveness in improving anxiety, cognition, and other mood symptoms.[26] Various studies have also shown positive effects of rhodiola on anxiety, including GAD.[27,28] In female rat models, treatment with rhodiola had favourable effects on stress-related sexual dysfunction.[29] Current human research on rhodiola has been limited to its effects on premature ejaculation and erectile dysfunction.[30,31] Ginseng has been shown to induce vasodilation and, therefore, increases blood flow to the genitals; however, current studies focus mainly on erectile

dysfunction.[32] Other studies supporting the use of ginseng in FSD were predominantly in post-menopausal participants. Similar to rhodiola, however, ginseng has research to support its use with individuals who have high stress and anxiety.[33,8,34] L-theanine also has research to support its use in reducing anxiety, depression, stress-related symptoms, and sleep challenges.[35] Since the presenting case was strongly associated with anxiety, treatment choices were primarily focused on addressing the mental-emotional aspect of the case.

LIMITATIONS AND FUTURE RESEARCH

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

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

Treatment Cost

Based on a local store, cost of treatment is approximately: $38 (L-theanine, 120 tablets), $33 (rhodiola, 60 capsules), $33 (fish oil, 120 softgels), $27 (vitamin D3, 500 softgels), $40 (Probiotics, 30 capsules), $5 (chamomile, lavender, lemon balm, 16 tea bags). In addition, the book *Come As You Are* is about $25. Considering that she is going to be managing her anxiety for the foreseeable future, which in turn affects her FSD, working to consolidate the interventions used will help to manage long-term costs. Based on the patient's goals, she has noted that the treatments used have been extremely helpful and she is currently not looking to change her treatment plan. This is especially important as she tapers off of her antidepressant medication for her anxiety. Once we find additional lifestyle tools to help manage her anxiety, reducing some of these treatments will be possible. This patient, in particular, did not have significant financial barriers to her care. It is important, however, to note that treatments for chronic conditions can be associated with a significant financial burden. The risk of managing anxiety with no form of medication or NHP needs to be considered with patients undergoing these treatments.

CONCLUSION

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

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