

Synopsis

Naturopathy

**Practice, Effectiveness, Utility,
Economics & Safety**



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Naturopathy:

Practice, Effectiveness, Utility, Economics & Safety

This synopsis provides an overview of *Naturopathy: Practice, Effectiveness, Utility, Economics & Safety*, the Health Technology Assessment (HTA) on naturopathy initiated by the World Naturopathic Federation (WNF), the non-profit organization representing the global naturopathic profession and composed of national naturopathic organizations and naturopathic educational institutions spanning all WHO Regions. The protocol and methods for the HTA were drafted in line with the World Health Organization HTA guidelines, adapted to meet the specific requirements and nature of the naturopathic profession. The HTA report was developed to provide an evidence-based summary of naturopathic practices and outcomes of naturopathic care. The scope of the HTA was informed by research conducted by the international naturopathic community. Access to the full HTA (650 pages) can be found on the WNF website: www.worldnaturopathicfederation.org.

Foundational Basis of the Naturopathic Profession

Naturopathy is a distinct traditional and complementary system of medicine practiced around the world with strong historical and cultural roots in Europe. Naturopathy was formalized as a distinct system of medicine at the end of the 19th century in Germany and at the beginning of the 20th century in North America. Naturopathy quickly expanded to the Western Pacific, Asia, Latin America and the Caribbean, Africa and throughout the rest of Europe. The naturopathic profession encompasses both naturopathy and naturopathic medicine. Naturopaths and naturopathic doctors (NDs) around the globe share a common philosophical framework and a set of core therapeutic modalities and practices as foundation to naturopathic practice despite some educational differences, as well as jurisdiction-specific regulation and restrictions.

Key Points

- Naturopathy, a traditional system of medicine in Europe and part of T&CM around the world.
- Naturopaths/NDs treat patients throughout the span of their life - with a focus on prevention and chronic conditions, as well as acute conditions and palliative care.
- Naturopathic diagnoses use biomedical terminology and traditional naturopathic diagnostic concepts.
- Naturopathy is defined by two core philosophies, seven principles and is guided by distinct naturopathic theories.
- Naturopathic practice is complex and incorporates core naturopathic therapies:
 - applied nutrition
 - clinical nutrition
 - herbal medicine
 - lifestyle modification
 - mind-body medicine
 - counselling
 - naturopathic physical medicine
 - hydrotherapy
 - other therapies based on jurisdictional regulations and naturopathic education



Naturopathic practice

Naturopathic Practice is characterized by specific assessment, diagnosis and treatment approaches used by naturopaths/naturopathic doctors. As a European traditional medicine system sharing several historical connections with Western medicine, naturopathic practice can successfully bridge traditional and biomedical approaches to practice. *Naturopathic Assessment* is person-centered with the goal of determining the factors contributing to a patient's state of health and their symptoms and conditions. It involves investigation into lifestyle, social, environmental, external, and genetic factors, and the impact of medical interventions. Naturopaths/naturopathic doctors employ a range of assessment tools including a thorough case history, standard conventional physical examinations and laboratory testing along with traditional naturopathic assessment techniques such as tongue and pulse diagnosis. The three main goals of a naturopathic assessment are to (1) determine the factors contributing to a patient's state of health, their symptoms and/or diseases; (2) collect the proper information to inform a naturopathic diagnosis and (3) assess the patient's vitality and state of wellbeing.

The three primary and interrelated purposes to a *naturopathic diagnosis* are to (1) accurately categorize the symptoms, condition and/or disease-state using biomedical terminology and diagnostic criteria along with traditional naturopathic diagnostic concepts; (2) determine the underlying causes of the patient's symptoms, conditions, or disease-state; and (3) determine the patient's healing ability.

Naturopathic practice has always been therapeutically diverse in its approach to healing and incorporates various *therapeutic modalities and practices* applied based on the naturopathic philosophical and traditional framework. The therapeutic modalities and practices core to naturopathic care and which are included in over 80% of naturopathic educational programs are clinical and applied nutrition, herbal medicine, lifestyle counselling, hydrotherapy, and homeopathy. Based on jurisdictional regulation and the training of naturopaths/naturopathic doctors in some countries, other modalities such as yoga,

naturopathic manipulation, acupuncture, intravenous therapies (IV), regenerative injection therapies and the prescribing of restricted products (e.g., bio-identical hormones, high dose vitamin D, compounds for IV therapy) form a significant part of the naturopathic scope of practice.

Naturopathic philosophies and principles

The naturopathic philosophies of *vitalism* (an innate intelligence of living organisms) and *holism* (the body is a complex adaptive system that exists as a unified whole) embrace every aspect of naturopathic care and are supported by seven naturopathic principles that guide naturopathic practice:

- I. First, Do No Harm (*primum non nocere*)
- II. Healing Power of Nature (*vis medicatrix naturae*)
- III. Treat the Cause (*tolle causam*)
- IV. Treat the Whole Person (*tolle totum*)
- V. Doctor as Teacher (*docere*)
- VI. Health Promotion and Disease Prevention
- VII. Wellness and Wellbeing



“107
countries have
a naturopathic
workforce”

Naturopathic theories

Several theoretical and conceptual frameworks inform naturopaths/naturopathic doctors clinical reasoning and decision making. The main theories included are:

- The *Naturopathic Therapeutic Order* which is a systematic approach to treatment that moves from minimally invasive to more forceful treatments as necessary.
- The *Emunctory Theory* which states toxic substances can be absorbed from the environment or produced by abnormal metabolic processes and must be effectively eliminated to achieve good health.
- The *Theory of Complex Systems* outlines that the body is a complex and self-sustaining dynamic and evolving system functioning within an environment of multiple nested systems which are interconnected, and naturopathic practice must reflect this complexity.

Naturopathic Professional Formation

Although there is some diversity in the educational standards and regulation of the naturopathic profession around the world, the profession is strongly united in the philosophies and principles that define naturopathic practice and, as well as in the core therapeutic modalities and practices used by the profession.

Key Points

- More than 110,000 naturopaths/naturopathic doctors (NDs) practicing in over 107 countries spanning all WHO Regions.
- 75% of countries where naturopathy/naturopathic medicine is practiced use the term *naturopath* and 41% use *naturopathic doctor* or *naturopathic physician*. Local variations such as *heilpraktiker*, *naturista*, *naturólogo* or *naturópata* reflect the language spoken in those countries.
- 35 countries have some form of statutory regulation for the naturopathic profession.
- Over 130 naturopathic educational programs exist around the world.
- Two main naturopathic educational programs are the doctorate-level training programs at over 4,000 hours - 52% of all programs - and the practitioner-level training programs at 2,500 hours.



Landscape of naturopathy by WHO Region

Naturopathy is a discrete traditional system of medicine developed in Germany in the mid-1800s. It then spread to countries in the region of the Americas, the Western Pacific Region, India, and throughout other European countries by the early 1900s. Currently, naturopathy/naturopathic medicine is practiced in 107 countries spanning all WHO Regions and it is estimated that there are over 110,000 naturopaths

and/or naturopathic doctors globally. Naturopathy is currently practiced in all WHO Regions.

- *Europe* is the traditional home of naturopathy with over 30 countries in that Region with a naturopathic workforce of around 60,000 naturopaths.
- Naturopathy was introduced into the *Region of Americas* in the late 1800s and currently there are over 30 countries in that Region with a naturopathic workforce of over 25,000 naturopaths and naturopathic doctors. North America (Canada and the United States) is considered

“5.5 million
naturopathic
patient visits
per month”

the home of modern naturopathy as this was where codification and education became most advanced. In North America naturopathic doctors are recognized as primary care practitioners in those states or provinces with regulation. North American NDs have played a significant role in leading naturopathic research and the codifying of naturopathic information.

- The **Western Pacific Region** has had a naturopathic workforce since the early 1900s and there are currently 14 countries in that Region practicing naturopathy with a workforce of over 10,000 naturopaths/NDs. Naturopaths/NDs in the Western Pacific Region, especially in Australia, have been instrumental in furthering naturopathic research for the profession.
- Naturopathy was introduced into the **Region of South-East Asia** in the 1920s via India and currently there are at least five countries with a naturopathic workforce of over 10,000 naturopaths/NDs. In India, naturopathy is a recognized part of the Traditional System of Indian Medicine (referred to as AYUSH: Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa Rigpa and Homeopathy) with naturopathy and yoga being combined in naturopathic studies.
- Naturopathy was introduced to the **African Region** in the mid-1900s and is now practiced in at least 13 countries in that region with a workforce of about 5,000 naturopaths/NDs.
- Naturopathy has been introduced to the **Eastern Mediterranean Region** since the late 1990s and is currently practiced in at least eight countries in that Region.

Regulation, licensure and registration of the naturopathic workforce and T&CM products

There is a naturopathic workforce in 107 countries. While 35 countries enforce statutory regulation of the naturopathic profession another 17 have a formal process of voluntary certification. Other regulatory models used include co-regulation and negative licensing. Statutory regulation follows several legislative frameworks including regulation specific to the naturopathic profession (i.e., Naturopathy Act), umbrella regulation under Allied Health or T&CM, registration of naturopathic practitioners and/or regulation of naturopathic practice.

Educational programs and standards for the naturopathic workforce

There are 131 naturopathic educational institutions globally with 38% residing in the Region of South-East Asia, 27% in the European Region, 22% in the Region of the Americas, 9% in the Western Pacific Region, and 4% in the African Region. There are two main naturopathic educational programs doctorate-level training programs (over 4,000 hours) and practitioner-level training programs at 2,500 hours. Over 52% of the current naturopathic medical educational programs are 4,000 hours or longer and less than 9% are under 2,000 hours. *Benchmarks for Training in Naturopathy* were published in 2010 by the WHO.

“131
naturopathic
educational
programs
worldwide”

Naturopathic education includes:

- naturopathic history, philosophies, principles, and theories.
- naturopathic medical knowledge, including basic sciences, clinical sciences, laboratory and diagnostic testing, naturopathic assessment, and naturopathic diagnosis.
- naturopathic therapeutic modalities, practices, and treatments.
- supervised clinical practice.
- ethics and business practices; and research.

Practice and Implementation of Naturopathy in Health Care Systems

There is extensive evidence describing clinical outcomes associated with naturopathic therapeutic modalities and practices, and a broad evidence base examining many other aspects of naturopathic practice providing a guide for how it might fit into the global healthcare system. Policymakers and other stakeholders seeking to understand how best to optimize the health workforce and integrate naturopaths/naturopathic doctors into their policies, programs, and services for community benefit must consider this evidence within the context of contemporary naturopathic practice.

Key Points

- Naturopathic care is cost-effective, particularly for chronic conditions and for higher disease burden.
- Direct risks associated with naturopathic care are infrequent and usually minor.
- The over 100 naturopathic community clinics provide naturopathic care to the underprivileged, marginalized, low income, and underserved populations.
- Naturopaths/NDs are well suited to play a more formal role in public health initiatives aimed at increasing health literacy.
- Naturopaths/NDs employ multiple forms and sources of knowledge and mobilizing knowledge to – as well as from – others.



Safety and risk of naturopathic practice

The main types of risk associated with naturopathic practice are similar to those from any other health profession that employs a broad scope of practice, and results primarily from tools of trade that naturopaths/NDs use and the primary-care context within which they work. While risks associated with naturopathic practice are relatively rare, they are potentially significant enough that regulatory initiatives aimed

at minimizing risks should be encouraged. Lower risks associated with naturopathic practice are highly dependent on appropriate levels of education and safe standards of practice, and mechanisms should be enacted to ensure these standards are met. Most risks associated with naturopathic practice are either not unique to naturopathic practice (e.g., adverse events from therapeutic tools such as botanical or intravenous treatments) or are associated with rogue practitioners rather than representative of naturopathic practice (e.g., fraudulent behaviours). The typology of risks

of naturopathic practice is what could be expected of any health profession with a substantive primary health care role and are substantively less than other practitioner groups performing similar roles.

Economics of naturopathic care

Globally naturopathic care is primarily covered by third party insurers or out-of-pocket costs borne by consumers, rather than by government-funded programs, which may reduce the accessibility of naturopathic care.

- Some countries incorporate government-funded naturopathic care either for specific populations (e.g., veteran care) or circumstances (e.g., worker's compensation).
- Economic evaluations of naturopathic interventions that have been conducted have reliably shown naturopathic care to be cost-effective, particularly for longer-term and chronic outcomes, and for persons with higher disease burden.
- Studies also suggest societal economic benefits from naturopathic care, such as improved presenteeism and reduced absenteeism, and lower overall insurance costs per person.
- Integration of complementary therapies in multidisciplinary settings has also shown the ability to reduce costs of care while delivering equal or better clinical outcomes in general inpatient populations, oncology patients and pain patients, and such findings are suggestive of a potentially beneficial role for naturopaths/naturopathic doctors in integrative multidisciplinary settings.

Naturopathic practice behaviors and patient characteristics

Results from an original research paper titled, "*Overview of international naturopathic practice and patient characteristics: results from a cross-sectional study in 14 countries*" highlights that naturopaths/NDs treat a wide range of conditions with over 70% of patients presenting with chronic conditions. Naturopaths/NDs also treat patients with acute conditions and focus on preventive and palliative care.

A typical naturopathic visit will generally involve the prescription, recommendation or use of an average of four different naturopathic treatments, therapies, or practices. Naturopaths/NDs treat a wide range of health conditions both as primary care practitioners and in collaboration with other healthcare providers.

International prevalence of consultations with a naturopath/naturopathic doctor

Although the naturopathic workforce has a significant presence globally, there is limited data on the prevalence of naturopathic consultations. The 12-month prevalence of consultations with a naturopath/naturopathic doctor ranged from 1% of the general population in the USA to 6% in European and Western Pacific Regions, though there are significant differences between and within Regions, which may be driven by a range of policy, legislative and social factors.

Access and equity in naturopathic care

The original research paper "*Naturopathic community clinics: international cross-sectional survey*" indicates that there are over 100 Naturopathic Community Clinics (NCCs) globally that offer free or low-cost naturopathic care to under-served populations. NCCs have been offered through various naturopathic educational institutions for over three decades.

- NCCs reach underserved, vulnerable, and marginalized populations such as low-income families, immigrants, refugees, people experiencing homelessness, indigenous peoples, people with HIV/AIDs and those dealing with addictions or drug use as well as individuals from diverse genders including transgender and non-binary.
- NCCs provide naturopathic care that is like that delivered in general naturopathic practice treating both chronic and acute conditions. Gastrointestinal, mental health, endocrine and musculoskeletal conditions are the most common presenting concerns of individuals visiting NCCs.

“100
naturopathic
community clinics
serving vulnerable
populations
globally”

Community education and health promotion activities of naturopaths/naturopathic doctors

The results of the original research paper, “*Community education and health promotion activities of naturopaths/naturopathic doctors: results of an international cross-sectional survey*” highlights that naturopaths/NDs use a variety of educational tools, often at no cost to patients and consumers, to improve health literacy and encourage self-care. The tools used focus on ways to change health behaviours, to provide self-care guidelines, to manage health concerns and to prevent future health issues. Commonly employed tools include information sheets and handouts, social and professional network communications and information talks for members of the community. Research indicates that individuals who visit with a naturopath/ND may be more motivated to engage in positive health behaviours. This combination of patient-centered education and motivation of patient group may mean the community education activities undertaken by naturopathic practitioners have a marked impact in their patient populations.

Mobilization of knowledge and information in naturopathic clinical practice

The original research paper titled, “*Naturopath’s mobilization of knowledge and information in clinical practice: an international cross-sectional survey*”, indicates that naturopaths/NDs are able to effectively draw knowledge from a diverse range of information sources to inform their clinical decision-making. Published research evidence is the prominent source of information informing clinical practice, naturopaths/NDs also draw on traditional knowledge, clinical experience and patient expertise regarding their own health condition. Naturopaths/NDs actively share their knowledge with patients and the wider community, suggesting they may act as knowledge brokers.

“300+
clinical studies
involving 100+
different health
populations”

Naturopathic Research

There is an extensive body of research examining naturopathic practices and therapies, though several considerations are needed to ensure research appropriately reflects naturopathic practice. The naturopathic community has been active in researching health topics beyond naturopathic medicine and T&CM.

Key Points

- Naturopaths/NDs have published over 2000 peer-reviewed articles since 1987 with notable increases in the last 20 years.
- Pragmatic clinical research methods apply a complex, person-centred approach that may help determine fidelity to naturopathic practice.
- The international naturopathic research community has demonstrated sustained commitment to codifying, synthesizing, generating and disseminating knowledge to the wider clinical and research community.
- Adequate infrastructure to further support naturopathic research and research capacity building, and integration into health systems is needed.
- Naturopathy must be recognized as a total system of traditional medicine when designing and conducting research investigating naturopathic care.



Researching naturopathy as a traditional system of medicine

Research requires a balance between internal validity and external validity. Achieving this can be challenging in T&CM professions, such as naturopathy, due to their whole practice nature. Research with a limited focus on external validity has been identified by naturopaths/NDs as having limited applicability to clinical practice. The naturopathic profession has a long tradition of generating new knowledge and naturopaths/NDs have been described as early adopters of various forms of research, and as improving evidence-based approaches to practice while maintaining a strong connection to their naturopathic philosophies and principles.

Challenges and advancements for naturopathic clinical research

Researching naturopathy/naturopathic medicine – as well as primary care, public health, and other T&CM practices - has historically presented several challenges due to the limitations of the randomized-controlled trial design when evaluating complex interventions underpinned by philosophies and principles beyond the biomedical paradigm.

- Naturopathic researchers have embraced widely accepted innovations in research design and methodology aimed at investigating person-centred interventions with multiple therapeutic elements.
- The pragmatic clinical research design allows for the inclusion of multi-modal interventions, real-world settings and flexibility in treatment delivery matching the approach taken in real-world naturopathic care.

Research dissemination by the global naturopathic research community

An original research paper titled, “*Knowledge dissemination by the naturopathic profession: a bibliometric analysis of naturopath-authored, peer-reviewed publications*” indicates that the international naturopathic research community has been actively publishing peer-reviewed research literature for over 30 years and has demonstrated sustained commitment to codifying existing knowledge, generating new knowledge and disseminating this knowledge to the naturopathic and wider allied-health clinical and research communities. Naturopathic research is conducted in most of the educational institutions that have a naturopathic program, especially those in the United States of America, Canada, Australia, Germany, India, and New Zealand.

“20+
naturopathic
research
centres”

Effectiveness of Naturopathic Clinical Practice

Naturopaths/naturopathic doctors treat diverse physical and psychological health concerns throughout the full range of a patient’s life. Most naturopathic visits focus on chronic diseases, but naturopathic clinicians also treat acute conditions and support patients in palliative care and those seeking advice for preventive medicine. Naturopathic researchers have published 235 original clinical research articles investigating a wide range of health interventions and sampling diverse health populations. Overall, 81.1% of the studies on the effectiveness of naturopathic clinical practice identified a positive response to at least one primary or secondary outcome measure.

Key Points

- Naturopathic researchers have conducted original clinical research involving 81 different illness populations.
- 81.1% of the studies investigating the effectiveness of naturopathic care identified a positive response.
- The risk of non-communicable diseases (NCDs) is strongly associated with modifiable risk factors which are addressed as part of naturopathic care.
- Naturopaths/NDs have been instrumental in the development of integrative oncology, nutritional psychiatry as well as the role of the microbiome on health.
- Further research is warranted on the effectiveness of naturopathic care.



Cancer and cancer-related conditions

Individuals seek naturopathic care for a range of cancers, as well as for recovery from cancer or palliative care. Naturopathic researchers have conducted 53 clinical studies investigating interventions for populations with cancer and cancer-related conditions, with 93.5% reporting a positive outcome. These are supported by over 100 observational studies and more than 60 reviews or meta-analysis. Conditions represented in these study populations include breast, colorectal, prostate, and cervical, and other cancers.

Cardiovascular conditions

Naturopaths/NDs can have a significant role in the prevention and management of cardiovascular and other NCDs. Naturopathic researchers have conducted 12 clinical studies investigating interventions for populations with cardiovascular conditions, with 72.7% reporting a positive outcome. These are supported by over 20 observational studies and more than 20 reviews or meta-analysis. Cardiovascular conditions represented in these study populations include hypertension, cardiovascular disease, post-cardiac surgery, and other cardiovascular conditions.

Complex immune conditions

The naturopathic approach views the management of conditions through a lens of complexity, addressing multiple causative factors and physiological systems concurrently is beneficial for patients with complex immune conditions. Naturopathic researchers have conducted 14 clinical studies investigating interventions for populations with complex immune condition. Complex immune conditions represented in these study populations include HIV and AIDS, multiple sclerosis and chronic fatigue syndrome.

Endocrine conditions

Naturopaths/NDs are well-placed to help in the treatment and prevention of endocrine conditions and other NCDs due to their specific training and focus

on lifestyle counselling and treatment of the various risk factors. Naturopathic researchers have conducted 23 clinical studies investigating interventions for populations with cardiovascular conditions, with 90.9% reporting a positive outcome. These are supported by 15 observational studies and 17 reviews or meta-analysis. Endocrine conditions represented in these study populations include type II diabetes mellitus, metabolic syndrome, and other endocrine conditions.

Gastrointestinal conditions

Gastrointestinal conditions are among the top reason patients seek naturopathic care. Naturopaths/NDs place a high importance on gastrointestinal health and recognize that it is linked to many other conditions. Naturopathic researchers have conducted 17 clinical studies investigating interventions for populations with gastrointestinal conditions, with 82.4% reporting a positive outcome. These are supported by 13 observational studies and 39 reviews or meta-analysis. Gastrointestinal conditions represented in these study populations include irritable bowel syndrome, functional gastrointestinal disorders, inflammatory bowel disease, coeliac disease, hepatobiliary and pancreatic conditions, and other gastrointestinal conditions.



“2,000+
peer-reviewed
scientific articles
in 30 years”

Mental health conditions

Naturopathy's broad-spectrum approach to health and disease and the naturopathic principle *Treat the Whole Person* means that naturopaths/NDs acknowledge the significance of a person's mental status when treating any condition. Naturopathic researchers have conducted 24 clinical studies investigating interventions for populations with mental health conditions, with 64.7% reporting a positive outcome. These are supported by over 50 observational studies and more than 80 reviews or meta-analysis. Mental health conditions represented in these study populations include depression, anxiety, and other mental health conditions.

Musculoskeletal conditions

Naturopaths/NDs use a broad treatment approach with musculoskeletal conditions, which are one of the most common reasons patients seek naturopathic care. Naturopathic researchers have conducted 30 clinical studies investigating interventions for populations with musculoskeletal conditions, with 89.3% reporting a positive outcome. These are supported by over 50 observational studies and more than 50 reviews or meta-analysis. Musculoskeletal conditions represented in these study populations include chronic neck pain, low back pain, osteoarthritis, fibromyalgia and other MSK conditions.

Neurological conditions

Naturopaths/NDs employ a diverse treatment approach in the treatment of neurological conditions. Naturopathic researchers have conducted 21 clinical research papers investigating interventions for populations with neurological conditions, with 66.7% reporting a positive outcome. These are supported by over 40 observational studies and more than 25 reviews or meta-analysis. Neurological conditions represented in these study populations include migraine and chronic headaches, Parkinson's disease, and other neurological conditions.

Skin conditions

Naturopaths/NDs place great importance on skin conditions as naturopathic theory views the skin as the largest detoxification organ of the body and as a representation of internal health. Naturopathic researchers have conducted 8 clinical studies investigating interventions for populations with skin conditions, with 62.5% reporting a positive outcome. Skin conditions represented in these study populations include acne vulgaris, psoriasis, vitiligo vulgaris and other skin conditions.

Women's health conditions

Naturopaths/NDs commit significant focus to women's health conditions and over 70% of the patients seeking naturopathic care are female. Naturopathic researchers have conducted 11 clinical studies investigating interventions for women's health conditions. These are supported by over 40 observational studies and more than 30 reviews or meta-analysis. Women's health conditions represented in these study populations include menopausal symptoms, menstrual disorders, and other women's health conditions.

Other conditions

In addition to the conditions listed above, there are a range of other conditions treated by naturopaths/NDs. Naturopathic researchers have conducted 14 clinical studies investigating interventions for these other conditions, with 85.7% reporting a positive outcome. The conditions represented in these study populations include overweight or obesity, respiratory conditions, and genitourinary conditions.

Other research publications related to health conditions

Naturopathic researchers have also published over 1400 peer-reviewed journal articles related to health conditions and roughly half of these are reviews and meta-analyses (n=357; 24.5%) or observational studies (n=363; 24.9%). These types of articles present an important contribution in the healthcare field to the understanding of health, illness, and its management.

Research on Naturopathic Therapeutics and Practices

Naturopathic practice is known for its complexity and flexibility with a range of treatments, therapies, and practices. There is strong consensus on seven core naturopathic modalities used in practice: applied nutrition and diet modifications, clinical nutrition and the use of natural health products, herbal medicines, lifestyle counselling, hydrotherapy, homeopathic remedies, and various physical modalities such as yoga, naturopathic manipulation, and muscle release techniques. Research on naturopathic therapeutic modalities and practices highlights how such treatments are employed - singularly and in combination.

There are over 300 original clinical studies that focus on clinical outcomes associated with naturopathic treatment modalities and practices. These studies investigate treatments for over 140 conditions. These clinical studies commonly feature pragmatic elements such as multi-modal interventions, flexibility in administration, and real-world settings. Overall, 77.6% of these studies each identified a positive response to at least one primary or secondary outcome measure.

Key Points

- A typical naturopathic visit generally involves the use of four or more different naturopathic therapeutic modalities or practices.
- Naturopathic care is known for its diverse and flexible therapeutic approach to healthcare.
- The complex intervention approach to care allows naturopaths/NDs to utilize the synergistic properties of various treatments and to treat the whole person.
- The naturopathic community have been leaders in examining the impact of integrating multiple T&CM treatment approaches in conventional care settings.
- The naturopathic multi-modal, complex intervention approach warrants further investigation.



Complex interventions

A holistic, patient-centered, multi-modal treatment approach is central to naturopathic care. Naturopathic researchers have conducted 25 clinical studies investigating complex interventions. These are supported by over 70 observational studies and 19 reviews or meta-analysis.

Applied nutrition

Applied Nutrition has an essential and foundational role in naturopathic care and includes diet therapy (therapeutic diets, fasting and individualized diet modification), therapeutic application of specific

foods and behavioural and lifestyle counselling related to eating behaviours. Naturopathic researchers have conducted 31 clinical studies investigating applied nutrition interventions, with 88% reporting a positive outcome. These are supported by over 20 observational studies and more than 30 reviews or meta-analysis.

Clinical nutrition

Clinical nutrition is one of the therapeutic modalities most used by naturopaths/NDs. Clinical nutrition includes vitamins and minerals, nutrients that have physiological effects such as amino acids and other amino-based compounds, food-based constituents, and other compounds that are important to foundational

human biochemistry and physiology. Naturopathic researchers have conducted 59 clinical research papers investigating clinical nutrition interventions, with 62.5% reporting a positive outcome. These are supported by over 50 observational studies and more than 90 reviews or meta-analysis.

Herbal medicine

More than half of naturopathic visits result in some form of herbal prescription. Naturopaths/NDs are trained to use a wide range of herbs from mild herbs to extremely powerful herbs that arguably are the basis of modern pharmacological medicine. Naturopathic researchers have conducted 48 clinical research papers investigating herbal medicine interventions, with 71.7% reporting a positive outcome. These are supported by over 70 observational studies and 19 reviews or meta-analysis.

Lifestyle modifications

Naturopaths/NDs were among the first health professionals to formally acknowledge lifestyle modifications as an important element of care. The importance of lifestyle counselling in naturopathic practice continues and is considered one of the core therapeutic elements in naturopathic practice. Naturopathic researchers have conducted three clinical studies investigating lifestyle modification interventions, with 100% reporting a positive outcome.

Mind-body medicine counselling

Mind-body medicine (MBM) counselling is prescribed and practiced with patients of all ages presenting with functional disorders (e.g., gastrointestinal, endocrine, neurological or cardiovascular conditions), structural disorders (e.g., musculoskeletal conditions, chronic pain), psychological conditions (anxiety, depression, ADHD), and as part of preventive and palliative care. Naturopathic researchers have conducted nine clinical studies investigating mind-body medicine counselling interventions, with 88.9% reporting a positive outcome.

Naturopathic physical medicine

Addressing or correcting structural integrity is considered an essential stage of the Naturopathic Therapeutic Order as there is a correlation between an individual's alignment and structure, the functioning of internal organs and a person's psychological state. Naturopathic researchers have conducted nine clinical studies investigating physical medicine interventions, with 66.7% reporting a positive outcome. These are supported by 20 observational studies and seven reviews or meta-analysis.

Hydrotherapy

Hydrotherapy - the application of water for therapeutic purposes - has been used for thousands of years and has been part of naturopathic care since its inception. Naturopathic researchers have conducted 17 clinical studies investigating hydrotherapy interventions, with 84.2% reporting a positive outcome.

Acupuncture

Acupuncture is included within the scope of naturopathic care in some countries such as Canada, the USA, South Africa, India, Germany, Switzerland, and Brazil. Various acupuncture methods are practiced by naturopaths/NDs, including needling, electroacupuncture, auricular acupuncture, acupressure, cupping and moxibustion. Naturopathic researchers have conducted 32 clinical studies investigating acupuncture interventions, with 84.8% reporting a positive outcome. These are supported by ten observational studies and 15 reviews or meta-analysis.

Yoga

Yoga plays a significant role in naturopathic care, especially in India where yoga and naturopathy are integrated in naturopathic educational programs and practice. Naturopaths/NDs use a variety of yogic practices, such as *asanas*, *pranayama*, and meditation, to achieve demonstrable improvements in patient health and wellbeing. Naturopathic researchers have

conducted 58 clinical studies investigating yoga interventions, with 86.3% reporting a positive outcome. These are supported by over 20 observational studies and more than 50 reviews or meta-analysis.

Optimizing pharmaceutical-based interventions

It is important that naturopaths/NDs are well-informed on drug-herb and nutrient interactions, and the comparison of pharmaceutical and naturopathic-based interventions. In some jurisdictions, primarily within North America, naturopathic doctors have prescribing rights as part of their defined scope of practice. Naturopathic researchers have conducted eight clinical studies investigating ways to optimize pharmaceutical-based interventions.

Other research publications regarding naturopathic therapies and practices

Naturopathic researchers have conducted extensive clinical research, yet it only represents one quarter of the total published peer-reviewed journal articles examining the broad range of therapies commonly used in naturopathic practice (n=1203). A substantial proportion of observational studies including research using survey, interview or focus group methods (n=195; 16.2%), and reviews and meta-analyses (n=297; 24.6%) have also been published by naturopathic researchers.

About the World Naturopathic Federation

In 2014 the WNF, developed by the global naturopathic community, was incorporated in Canada. As of 2021, the WNF represents 75 naturopathic organizations, with 35 national naturopathic organizations as full members, 11 as associate members, and 25 as educational members. Between 2015 and 2021, the WNF has actively worked to codify and consolidate the current information and research available on the naturopathic profession. In that time, the WNF produced 19 publications and seven policy statements.

WNF Mission

- Supporting the growth and diversity of naturopathy / naturopathic medicine worldwide.
- Supporting the appropriate regulation and recognition of naturopathy / naturopathic medicine.
- Promoting accreditation and the highest educational standards in each WHO Region.
- Encouraging naturopathic research.
- Establishing and maintaining a database of naturopathic organizations, regulation, accreditation, conferences, and research activities.
- Working with world agencies (World Health Organization, United Nations, UNESCO) and national governments and supra-national agencies to promote the naturopathic profession.





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