PERSONALIZING WESTERN HERBAL MEDICINE: WEAVING A TAPESTRY
OF RIGHT RELATIONSHIPS, A GROUNDED THEORY STUDY

by

Kathryn Jean Niemeyer

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SIGNED: Kathryn Jean Niemeyer
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DEDICATION

I would like to first and foremost dedicate this dissertation to my husband Mark, my comma man and partner in creating gardens.

Then, I would like to dedicate this to the wise women in my family whose names will soon be lost to history: my great grandmother Jane Meyering-Bunning who went to the Indians for her herbal medicines, my grandma Kate Bunning-Cnossen who went to the fields and gardens for medicines for her family, and to my mother Jean Cnossen-Wiersma for taking me into the fields and introducing me to the weeds.

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ABSTRACT

Western herbal medicine (WHM) is a whole system of medicine, practiced by a wide range of practitioners, including nurses. WHM is based on beliefs, assumptions, and practices that have evolved over time distinct from conventional Western medicine. Practitioners of WHM use naturally-occurring crude plant materials, such as root, bark, or flowers with little or no industrial processing for persons with chronic disease. Herbal medicines are formulated for each person’s unique symptom variations, energetic profile, cause of the health issue and the supporting mechanisms. This approach to herbal medicine is not clearly explicated in the literature and is in contrast to the use of highly-processed herb products in a one-size-fits-all approach that fails to reflect WHM as a whole system.

The purpose of this study was to develop a grounded theory that explains the basic social psychological process WHM practitioners use to formulate and tailor crude plant herbal medicines for individuals with chronic disease. This study was framed in complex adaptive systems theory with persons and plants as complex adaptive systems.

Data were sequentially collected, from a theoretical sample of 17 North American WHM practitioners contributing a total of 39 interviews, and analyzed using the constant comparison method with open, axial, and selective coding. Emerging categories and concepts were developed through analysis of data grounded in experiences of herbal practitioners. The process of Personalizing Western Herbal Medicine to persons experiencing chronic disease consists of five steps with a decision-making subprocess of five steps. The core concept of Weaving a Tapestry of Right Relationships explains what WHM practitioners do when Personalizing Western Herbal Medicine. Right relationship is emergent coherence and accounts for wholeness as the relationship and interaction of the parts. Right relationship weaves through connecting
each step in the process of *Personalizing Western Herbal Medicine. Creating Concordance*
describes right relationship between the person and the herbal medicine. Concordance is created
between the herbal medicine and the person with chronic disease when the practitioner tailors the
herbal medicines to the person. Concordance is when an herbal medicine fits the whole person
and there is a personal shift or restoration of dynamic equilibrium.
CHAPTER ONE: INTRODUCTION

Western Herbal Medicine (WHM) is a clinical practice using naturally occurring crude plant materials, such as root, bark, or flower, with little or no industrial processing for the treatment of disease and promotion of well-being (Niemeyer, Bell, & Koithan, 2013; Rosenbloom, Chaudhary, & Castro-Eschenbach, 2011; Tilburt & Kaptchuk, 2008). Practitioners of WHM formulate herbal medicines to address the cause or global pattern of the dysfunction or imbalance and treat the whole person by supporting and promoting self-healing through the use of organ-system and constitution-specific herbs (Evans, 2008; Klein & Dunkel, 2003; Moss, Boon, Ballantyne, & Kachan, 2007; Priest & Priest, 1982). Formulation is the process of mixing herbs or their liquid extracts together and individually tailoring or customizing herbal medicines to the individual (Casey, Adams, & Sibbritt, 2007; Hoffmann, 2003) and is considered to be a standard of practice in WHM (Bone, 2003; Brinker, 2004b; Hoffmann, 2003). Formulations of multiple medicinal plants are typically comprised of water and/or alcohol or glycerin plant extracts in the form of teas, tinctures, and high concentration extracts, but may also include plant powders, juices, syrups, vinegars, or topical creams, ointments, liniments, washes, gargles, or douches (Bone, 2003; Brinker, 2004a; Casey et al., 2007; Hoffmann, 2003).

WHM is also referred to as herbal medicine, botanical medicine, Traditional Western Herbalism, and Phytotherapy, and is practiced as a system of healing in Australia, Canada, New Zealand, the United Kingdom (UK), the United States (US), and Western Europe (Niemeyer et al., 2013). WHM is based in traditional knowledge (Evans, 2008; Hoffmann, 2003; Mills & Bone, 2000), including empirical and theoretical knowledge, and constitutes a whole system of medicine. Whole systems of medicine are defined as “...complete systems of theory and practice that have evolved over time in different cultures and apart from conventional or Western
The National Council of Complementary and Alternative Medicine defines traditional methods as evolving from “indigenous theories, beliefs, and experiences handed down from generation to generation” (NCCAM, 2010, p. 4).

Traditional knowledge evolves over extended periods of time, is learned through observation and hands-on experience, exhibits an unbroken line of narrative transmission, is holistic, and highlights the dynamic interconnectedness of humans with the universe or environment (Dods, 2004; Evans, 2008; Johnson, 1992). In traditional knowledge, patterns of thinking are formed by the inseparability of people and the natural environment (Durie, 2004).

WHM is a whole system of healing arising from traditional knowledge which is evidenced in the use of whole crude plant preparations or native extracts of medicinally-active plant structures (Brinker, 2004a). Native extracts are used in polyherb formulas with treatments determined by a focus on personal energetics or constitution, holism and balance. In addition, herbal treatments in WHM are directed at the cause of the problem with the goal of treatment to strengthen the constitution of the person (Klein & Dunkel, 2003; Moore, n.d.). Therefore, when individuals present with the same or similar symptom patterns or conventional diagnosis, they are often treated with different herbal preparations.

For example, following an assessment of a person for allergic rhinitis and insomnia, a wide variety and combination of herbs may be recommended and formulated by the WHM practitioner. A daily tincture to improve and support normal functional status and reduce rhinitis over time would most likely be recommended. A WHM practitioner may prescribe a herbal combination including an immune-enhancing herb like *Echinacea angustifolia*, antiallergic herbs like *Albizzia lebbeck* or *Scutellaria baicalensis*, anti-catarrhal herbs such as *Euphrasia officinalis*, *Hydrastis canadensis*, or *Plantago lanceolata*, an anti-inflammatory herb like *Urtica*
dioica leaf, and a lymphatic like Phytolacca decandra or Galium aparine. Additionally, the depurative actions of E. angustifolia and G. aparine would be considered beneficial in this formulation. Herbs considered beneficial for the gastric wall lining to promote normal immune function, such as Glycyrrhiza glabra or Calendula officinalis, could be included in this formulation. If a heating and moving herb is needed, Zingiber officinale may be considered. Or if cooling is needed, G. glabra might be considered, although it may be too moistening for this person. If stress is compounding the allergic rhinitis or the insomnia, Matricaria recutita may be used in place of C. officinalis or a calming tea may be included in the recommendations. A separate nighttime mix would be temporarily added to reduce the insomnia. This mix may contain liquid extracts of herbs such as Passiflora incarnata, Melissa officinalis, Scutellaria lateriflora, and Valeriana officinalis. The formulas would be refined depending on the individual’s overall strengths and weaknesses, physiological responses, and energetics or constitutional tendencies. Likewise, the formula may be altered due to individual tolerance of the taste or odor of the preparation.

In contrast to the holistic approach of the WHM practitioner, a biomedical clinical practitioner, using herbs as a treatment modality based on nosology, might address patients presenting with allergic rhinitis by recommending an Echinacea spp. or Petasites hybridus standardized supercritical CO2 extract product or anti-inflammatory products of Curcuma longa or Boswellia serrata. Insomnia would be addressed with an herbal product such as V. officinalis extract standardized to valerenic acid, or a supercritical CO2 extract of valerian. These recommendations represent substitutions for pharmaceuticals and would be applied uniformly from person to person, missing the individual and unique nuances of the patient. As such, they would fail to support normal and balanced functioning of the person’s individual energetics or
constitutional physiology. Herbal products utilized by the biomedical clinician can differ greatly in composition from native extracts and are characterized by reduced complexity when compared to the individually tailored, synergistic formulations of the WHM practitioner.

The process of personalization of herbal medicines makes a unique contribution to the treatment of chronic diseases. It is of interest to integrative medicine practitioners, complementary and alternative medicine practitioners, whole systems practitioners, herbal medicine practitioners, and holistic practitioners. Individualized herbal treatment protocols are also of interest to nurses who practice as herbalists, incorporate herbs as complementary treatments, or have patients taking formulations or seeking treatments from practitioners of WHM. Yet, the basic social process of formulating individualized herbal medicines or tailoring herbal medicines to the individual with chronic disease is unexplored and insufficiently documented. Little is documented about the clinical interactions, healthcare approaches, and healing practices that WHM practitioners use with patients experiencing chronic disease. Therefore, the purpose of this qualitative study is to develop a grounded theory of the basic social psychological process that WHM practitioners use when tailoring herbal formulations to individuals with chronic diseases.

**Background**

WHM is an approach to healing that is rooted in Western world traditional knowledge. Like a river with multiple tributaries, WHM has multiple tributaries through history that have developed and merged into the present day practice. Throughout history, WHM has adapted, adjusted, and evolved resulting in hybridized and time-tested approaches to herbal medicine. Out of necessity or because of the availability of plants and lack of other medicinal material, herbal medicine has been a staple in all cultures throughout history (Griggs, 1997). Although not always
called WHM and more commonly called herbalism or herbal medicine, WHM has been practiced in some form and referenced in European history for thousands of years (Duke, 2000; Griggs, 1997; Sumner, 2000).

**Historical Overview of Western Herbal Medicine (WHM)**

A main tributary of the current practice of WHM is a shared history with all of medicine in the Western world. Yet, herbal medicine has departed from this main tributary multiple times throughout history. Ancient use of herbal medicines is documented in written records of the non-Western Sumerians as well as early Egyptians and was eventually incorporated into the practice of the Arabs, Greeks, and Romans (Griggs, 1997; Sumner, 2000). Early influences in WHM include Hippocrates who advocated the use of simple herbs along with a balanced way of living, a humoral system of diagnosis and treatment, and an approach based on the “vis medicatrix naturae” or healing power of nature (Griggs, 1997; Porter, 1997; Wood, 2004). Dioscorides provided one of the first materia medicas, Galen classified herbs therapeutically, and Avicenna continued Galen’s work with an extensive herbal classification. Paracelsus added the doctrine of signatures to the theory of practice of herbal medicine and Gerard wrote one of the first herbals in England in the 1500s. The history of herbal medicine demonstrated periods of combining the use of minerals and/or astrology with herbs (Griggs, 1997; Lindemann, 1999; Porter, 1997).

Parallel to the primary documented historical tributary is the continual presence of herbal medicine practiced by the traditional healer, the ‘amateur’, the root digger, conjure women, midwives, domesticates, and wise women healers (Achterberg, 1990; Griggs, 1997; Riddle, 1997). These roles were often relegated to rural areas or women healers and herbal medicines may have been, at times and in circumstances, combined with healing rituals (Achterberg, 1990; Griggs, 1997; Riddle, 1997). This tributary has received minimal attention in the historical
records, yet is central to the development of contemporary WHM. It is known that the drug class of digitalis glycosides was developed from the plant *Digitalis purpurea* and while the name of the physician credited for this discovery is recorded in history, the name of the wise women herbalist who gave him the herb and taught him about its use is unknown and has not been recorded in history (Achterberg, 1990; Griggs, 1997). Over time, this tributary became designated as indigenous practices and folk knowledge of herbal medicine (D.E. Allen & G. Hatfield, 2004; Griggs, 1997; Sumner, 2000).

Flowing between and around these two main tributaries is the influence of religious orders. In the middle ages, much of the written work on plants as medicine was preserved and added to by Catholic Benedictine monasteries or convents (Sumner, 2000) especially in the case of Hildegard of Bingen, a nun in the twelfth century (Hoffmann, 1999). The monasteries and convents became centers for healing. Later, religious sects or groups that contributed to the preservation and evolution of WHM, particularly in the US, included the Adventists, the Shakers, the Mormons (Libster, 2004; Sumner, 2000), and Protestants (Griggs, 1997; Hoffmann, 2005). In the early 1800s, along with the botanical medical movement in the US and England (Porter, 1997), there were communities of nurses using botanical medicines. These nurses were the Shaker infirmary nurses, the pioneer nurses and midwives of the Church of Jesus Christ of Latter-day Saints, and the Sisters of Charity hospital nurses founded by Mother Elizabeth Ann Seton (Libster, 2004). It was in the later 1800s that Florence Nightingale used herbal medicines in her treatment protocols (Nightingale-Museum, 2006). Along with herbal medicines, Nightingale’s practice was guided by the belief in “vis medicatrix naturae” (Nightingale-Museum, 2006) and the belief that the source of healing resides in the patient (Nightingale, 1859/1992; Reed, 2009).
Another herbal medicine tributary is Native American indigenous knowledge. This tributary intersected with folk medicine practices during the colonization of North America and became a significant influence in the 1800s (Griggs, 1997; Sumner, 2000). During the botanical movement in the 1800s, a new tributary emerged leading to WHM as it is practiced today. The Thomsonian system that developed professionally as Physiomedicalism and concurrently with the broader Eclectic physicians was composed of physicians considered “irregular” practitioners separate from conventional physicians by virtue of distinct educational institutions and their primary use of botanical remedies (Griggs, 1997; Porter, 1997). While they developed their herbal knowledge by synthesizing existing folk medicine and local indigenous practices (American Indian) along with their own experiences, these physicians influenced herbal medicine and are often credited with organizing structures or systems of herbal medicine in the US and the UK (Brinker, 2004a, 2010; Griggs, 1997; Menzies-Trull, 2003; Wood, 2005). To a great extent, the American Medical Association organized in oppositional reaction to the botanic, homeopathic, and hydropathic movements in the 1800s (Porter, 1997). The practice of botanical medicine continued into the mid-1900s, but was often marginalized, associated with “quackery”, and at times evidenced only in rural areas (Achterberg, 1990; Griggs, 1997).

The most recent tributary influencing WHM is bioscience and research. Until the renewed interest in the last 25-35 years, WHM derived primarily from the fusion and adaptation or the joining of multiple historical tributaries with ongoing experiences of herbal medicines (David E. Allen & Gabrielle Hatfield, 2004; Bergner, 2010; Brinker, 2004a, 2010; Griggs, 1997; Libster, 2004; Menzies-Trull, 2003; Winston, 2010a; Wood, 2004, 2010). While the amalgamating of traditions has continued and is evident in the practice of herbal medicine today, WHM is currently blended with biomedical research on phytochemistry and on applications and
preparations of herbal medicines that are outside traditional approaches (Bone, 2003; Mills & Bone, 2000). Furthermore, it is not uncommon to see a blending of WHM with the practices and theories of Traditional Chinese Medicine, Ayurveda, naturopathy, or nursing. WHM is an approach to treatment that while reflecting blendedness and a layering of healing knowledge remains rooted in Western traditional folk and indigenous knowledge and theories of herbal medicines.

**Western Herbal Medicine (WHM) Practitioners**

Currently, there are 1,342 general members and 235 professional members in the American Herbalists Guild (AHG), the professional organization for practicing herbalists in the US (T. Romm, 2012). It is estimated that there are equal numbers of independent US practicing herbalists not associated with the AHG. Although it is not known how many nurses practice WHM, continuing educational credits are offered for nurses at major herbal medicine conferences and many nurses attend and participate.

WHM practitioners are a diverse group of healthcare providers who share values, beliefs, knowledge, practices, traditions, and goals. The range of education for herbalists extends from apprentice educational programs and programs providing certification of completion to bachelor and master degree programs. In the US, the practice of herbal medicine is not regulated or restricted by educational criteria or licensure. While WHM is practiced as a whole system of medicine by herbal practitioners, like other whole systems of medicine (Traditional Chinese Medicine, Ayurveda, or Homeopathy), WHM is often practiced in conjunction with conventional medical practices of nurse practitioners and physicians as well as by alternative practitioners like chiropractors, massage therapists, or naturopathic physicians.
In the US, there are both informal (wise women herbalist, vitalistic herbalist) and formal (Registered Herbalist) practice delineations with multiple undefined layers of practitioners in between (folk herbalist, clinical herbalist, medicinal herbalist, traditional herbalist). While there are numerous titles for WHM practitioners, the variations in title often represent only differences of emphasis or focus and personal preferences.

“Registered Herbalist,” delineated as RH (AHG) and formerly recognized as “Professional Herbalist,” is a title of recognition conferred by the AHG upon fulfilling clinical time, experience, and academic training criteria. Registered members of the AHG are asked to verify knowledge of a minimum 150-plant materia medica, a framework for developing treatment protocols, existing practice protocols, and ethics in clinical practice (Northage-Orr & Tierra, 2012). Yet, titling as a Registered Herbalist is a voluntary process and provides no additional practice privileges than a nonprofessional herbalist. Therefore, the title of “herbalist” in the US represents WHM practitioners from multiple educational backgrounds and practice levels. Despite this variation, most practitioners of WHM in the US continue to practice based on traditional herbal knowledge of plant growth and harvesting, medicinal preparations, and applications.

In an attempt to legitimize herbal medicine in the UK and distance it from folk medicine, the term “phytotherapy” was adopted in 1964 to define the professional practice of herbal medicine (Evans, 2008; VanMarie, 2002). While bringing UK herbalism in line with the dominant orthodoxy of evidence-based science, this professional self-regulation has also brought restraint and government-level regulations (Evans, 2008; VanMarie, 2002). In comparison, by avoiding regulation and restraint and to “challenge the primacy of science as an appropriate foundation” (Evans, 2008, p. 2099), herbal practitioners in the US have failed to define the
practice of herbal medicine, self-regulate, or initiate practice standards except through AHG registered herbalist credentialing. WHM practitioners in the US maintain an ongoing identity with folk and traditional practices, yet blend traditional practices with modern biomedical research findings in educational materials and herbal medicine literature.

In the last 15 years, practitioners of WHM have started to consider the impact of biomedical research of herbs and herb products on WHM and incorporate the dominant language of biomedicine into traditional practices. While readily integrating bench research on the complexity of medicinal plant constituents or phytochemistry, there has been hesitancy to embrace clinical research that reflects reductionism and a positivist philosophy not consistent with the holistic and energetic basis of WHM. Bench research, primarily phytochemical and pharmacological, has provided insights into the structure and complex actions of single plants. In contrast, clinical research using a pharmaceutical model is faulted for not being inclusive of the WHM approach nor representative of the outcomes seen in WHM clinical practice (Gangemi, Turner, Wolkart, Hulsey, & Bauer, 2005; Hoffmann, 2003; Treasure, 2005). Thus, clinical research from the reductive research paradigm is outside the context of traditional herbal wisdom, a practice that is based on whole person constitutional treatment, the healing power of nature, and energetics of herbal medicines (Winston & Maimes, 2007).

**Practice Beliefs, Assumptions and Principles of WHM Practitioners**

The beliefs, assumptions and principles of WHM pertain to how herbs work in interaction with the person to promote healing and balance. These beliefs, assumptions and principles encompass holism, constitutionalism, energetics of the herbs and the person, self-healing, vitalism, as well as the inherent affinity that humans have for medicinal plants because of coevolution. The beliefs, assumptions, and principles of WHM practitioners are not articulated as
practice theories that fully describe the psychosocial and social-environmental processes forming the basis of WHM. Yet, the beliefs and assumptions of causation and effects of herbal medicine are often articulated as the “therapeutic framework” for the basis of developing treatment protocols (Northage-Orr & Tierra, 2012; Winston & Maimes, 2007).

Practitioners of WHM approach healing from a holistic (Hoffmann, 1990, 2003) and, often, energetic or constitutional perspective (Moore, n.d.; Winston & Maimes, 2007; Wood, 2007, 2008). The concept of energetics represents an attempt to understand whole self-organizing systems. Both the person and the herbs are appreciated as whole complex systems and patients are treated out of consideration that the problem or imbalance, excess or deficiency, is from multiple irreducible factors informed by each person’s physiologic, emotional, social, and family environments, and is contextualized by the person’s history and experienced life (Mills & Bone, 2000; Moore, n.d.; VanMarie, 2002). Likewise, the overall constitution or global characteristics of the person will, in part, determine receptivity and responses to herbal medicines. Therefore, herbal treatment is seldom marginalized to the exclusive treatment of local symptoms (Hoffmann, 2003; Mills & Bone, 2000).

The concept of constitution in WHM describes a system for understanding a person’s overall natural tendencies or predisposing whole-person strengths and weaknesses in relationship to disease and wellness and so guides herbal treatment (Moore, n.d.; Wood, 2004). Constitution is used to shift a diagnostic focus to the whole person from a focus on pathology or disease (Klein & Dunkel, 2003). The concept of constitution is a summary of functional patterns of accommodation and is used to determine how to “…effect changes to strengthen the person…” according to their nature (Moore, n.d., p. 5). Constitutionally treating the person or treating patterns of excess or deficiency means primarily to balance and secondarily to support and
strengthen the whole person along with treatment of symptoms or tissue states (Moore, n.d.; Wood, 2004).

Energetics is considered an approach to constitutional assessment and refers to patterns of excess or deficiency in patients (Moore, n.d.). The concept of energetics is also more commonly applied to herbs and is used to describe the qualities and effects of herbs or how herbs work to influence functioning. This is evident in the use of traditional herb classifications. Broad, nonspecific categories reflecting the concepts of constitution and energetic systems describe the properties of the herbs and how they work, such as “adaptogen” or “alterative”. The stimulating, sedating, warming, cooling, moistening, or toning properties of herbal medicines used in the context of the person’s constitution can help strengthen and support the person, thus facilitating self-healing repair and restoration (Wood, 2004). The concept of energetics constitutes one of WHM’s foundational beliefs. WHM treats the tissue state and the presenting symptoms along with treating the underlying imbalance through the application of energetics and constitutional medicine (Klein & Dunkel, 2003; Moore, n.d.; Wood, 2004).

Belief in the healing power of nature and the natural capacity to self-heal undergirds WHM (Winston & Maimes, 2007) and results in the synergistic use of plants in polyherbal formulations to strengthen the patient and improve functioning, thereby nudging the self-healing process (Mills, 2005; VanMarie, 2002; Winston & Maimes, 2007). Plants are believed to work with plurality to enable self-healing by strengthening, supporting, balancing, and moving physiology with the practitioner facilitating the healing process (Hoffmann, 2003; Mills, 2005). Words used in WHM to describe herbal activity, such as nudge, assist, and facilitate, reflect assumptions of self-healing (Mills, 2005; Mills & Bone, 2000). Consistent with this belief in self-healing, the role of herbs is different from pharmaceuticals that often replace, suppress, or
inhibit. While synthetic drugs are chemically pure with pharmacological power and force, herbal medicines influence the body subtly by providing multiple nutrients and mild bioactive phytochemicals that assist the person’s own healing processes. Herbal medicines are used to support the person during self-healing (Winston & Maimes, 2007). This can be illustrated in the case of simple bacterial infections. Although there are no herbal equivalents to antibiotics, herbal formulations can be used to increase white blood cells and immune factors, decrease inflammatory mediators, reduce mucus formation, and provide nutritive factors thus supporting and enabling self-healing. Furthermore, healing is viewed as an interactive process with affinity between person and plants that requires time and is enhanced with personal intention and self-determination.

Vitalism, as a therapeutic principle, is a recurrent theme in various forms and with different interpretations in the literature of WHM. Vitalism is defined as belief in an essence or vital force that is considered intrinsic for healing and distinct from the pure chemical or physical force. Vitalism is used in WHM to differentiate the holistic perspective from the mechanistic view of biology. The mechanistic view of life has been propagated since the dualism of Descartes in the 1600s, followed by the iatromechanics of physicians like Boerhaave and Cullen and continues to be reflected in medical specialization and research (Griggs, 1997; Lindemann, 1999; Porter, 1997; Wood, 2004). Historically, vitalism is tied to WHM through the eclectic medical movement of the 1800s that coined the motto “sustain the vital forces” and the more philosophically vitalistic physiomedicalists (Brinker, 2012; Griggs, 1997). Vitalism has been referenced by some WHM practitioners in relationship to the application of constitutional medicine and provides justification for homeopathic or drop dosing used by some practitioners of WHM. With this application, vitalism is considered the “basis” of health (Wood, 2005).
Vitalism has been used concomitantly with the concept of spirit. This re-interpretation of vitalism and alignment with the concept of spirit reflects a history of religious and shamanic influence, and a current Native American influence in WHM. In the context of spirit, vitalism is also tied to a holistic model of treatment that is founded on connection to the ecology of earth and personal integration and views causation as multiple and mutual (McQuade Crawford & Upton, 2010; Trenkle, 2005). Vitalism is often used as a concept to denote the complementation of spirit with reason or science to provide a more comprehensive view of reality and the holism of humanity.

Vitalism, like all beliefs and assumptions, has adapted and morphed to a broadened perspective. Vital force associated with holism and energy has been defined as the “sum total” or overall cohesiveness located within the person mobilized to maintain and protect health (Caldecott, 2002). Furthermore, vital force has been described as endogenous, integrative, and manifesting as vital rhythms at every level (Mills & Bone, 2000). More recently, vitalism has been associated with the WHM belief that the person is whole and dynamically interacting and exchanging energy and information with the equally dynamic environment where health emerges from the essential drive to self-organize (Mills & Bone, 2000). This conceptualization of vitalism is consistent with the explanation proposed by complex systems science that replaces the unidirectional views of mechanism and vitalism with the perspective that coherent patterns emerge from the flow of information within nested systems in complex adaptive systems (Koithan, Bell, Niemeyer, & Pincus, 2012). Figure 1 depicts emergent coherent structures in complex systems with bidirectional flow of information differentiated from the unidirectional flow of information in the vitalist and mechanistic perspectives.
Unlike WHM in Australia, where there is no longer evidence of vitalism in the herbal medicine literature (Evans, 2008), there is still evidence of the assumptions of vitalism in the WHM literature in the US and it is often referred to as a characteristic of humans, plants, and the greater environment of the universe. Vitalism is often used in WHM to complement or augment reductive science, thus accounting for a more comprehensive view of reality.

When describing the therapeutic interaction between plants and humans using modern scientific language, WHM practitioners claim that there is an inherent affinity between the person and the plant world (Spelman, 2006b). Receptivity to herbal medicine is mediated by cellular memory. Because humans have coevolved and coexisted with plants since time immemorial, there exists a deep knowing, inseparability, and interaction between the person and plants (Duke, 2000; Spelman, 2006b). Plant medicine acts to modulate numerous cellular pathways with multiple receptor actions impacting multiple targets and so affects the complex
integration of the whole person (Niemeyer et al., 2013; Spelman, Duke, & Bogenschutz-Godwin, 2006). Herbal medicines used in WHM are, with few exceptions, plants with long histories of use and the herbal preparations are often traditional preparations.

Summary

The beliefs and assumptions of WHM are grounded in traditional knowledge of the interconnectedness of humans with their environments and have brought forth distinct traditional practices. The traditional practices unique to WHM include the use of whole plant extracts in multiple plant formulations tailored to magnify the synergy of the herbs. Furthermore, these formulations are individualized from a whole person diagnostic focus, which includes the underlying constitutional properties or energetics of the person, and address the roots or causes of disease. Herbal formulations are designed to promote normal functioning and strengthen the constitution and thereby facilitate self-healing. Individual formulations are changed over time to adapt to the dynamic nature of the patient. Along with herbal medicine practices, WHM practitioners often emphasize diet, bodywork, and therapeutic life-style choices to support a comprehensive therapeutic package.

Conceptual Framework

The theories framing this study are the whole systems theories of complex adaptive systems (CAS), nonlinear dynamic systems (NLDS) and social network theory. The theories are based on the worldview of organicism and contextualism (Drack, 2009; Gilbert & Sarkar, 2000). They encompass interconnectedness of whole systems including an inseparability of humans with their environments, “…emergent and nonlinear outcomes…” with local and global effects, and healing approaches that are “…complex, synergistic, and interdependent…” (Koithan et al., 2012, p. 8). CAS and NLDS theories can be used to explain the relationship between plant
medicines and persons expressed in the traditional knowledge of WHM, a whole systems approach to healing. Whole systems theories are useful to understand disease, wellbeing, and the social-environmental processes encompassing healing in WHM.

**Principles of Complex Systems Science**

The complex systems science theories of CAS and NLDS study how collective patterns and behaviors are emergent from the parts of a system and how systems interact with environments (Koithan et al., 2012; Morin, 2008). Whole complex systems are adaptive, dynamic, nonlinear and open with ongoing energy and information exchanges within the system and with the system’s environment. Systems nest within systems where every system has both local and global environments and demonstrates emergent organizational patterns resulting from the interaction and connectedness of the parts (Bar-Yam, 2003; Capra, 1996; Zimmerman, Lindberg, & Plesk, 2001).

CAS are whole systems that change over time in nonlinear and unpredictable ways at local and global levels in response to perturbation (Granic & Hollenstein, 2006; Koithan et al., 2012). CAS demonstrate emergence where the whole system is not predictable by the properties of the parts (Gilbert & Sarkar, 2000) and emergent patterns may be exponential, synergistic, and coherent. Self-organization in CAD systems drives and mediates emergent order allowing for adaptation and greater complexity. Systems are dynamic and evolve to “edge of chaos” states where order and disorder or coherence and flexibility rapidly flux and shift in response to information and energy exchange giving way to greater system complexity (Guastello & Liebovitch, 2009; Koithan et al., 2012; Morin, 2008; Newell, 2003).

Humans are self-organizing systems interconnected and in constant interaction with their environments where the whole emerges from interaction of the parts and is greater than the sum
of the parts (Ahn, Tewari, Poon, & Phillips, 2006). Likewise, medicinal plants self-organize and are dynamically-adaptive systems in interaction with their environment (Ganora, 2009; Macies, Galindo, & Galindo, 2007; Niemeyer et al., 2013). CAS can be used to explain and conceptualize the interactions between and within plants and humans as well as the whole-system approach of WHM.

**Plants as Complex Systems**

Plant complexity is synergistic and compounded at levels of scale. A single plant is phytochemically complex: the effect of the entire therapeutic portion of the plant (chemical matrix of the medicinal or beneficial portion of the plant) is greater than the individual plant constituents and the effects of the therapeutic portion of the plant or whole plant cannot be anticipated by knowledge of the activities of single constituents (Niemeyer et al., 2013; Spelman, 2006b; Spelman et al., 2006). Practitioners of WHM, while knowledgeable about phytochemistry, apply knowledge of plant complexity in the formulation process by selecting and using herb preparations based on traditional classifications of the effects of the whole therapeutic portion of the plant and the synergistic effects of these in formulation together.

While a single plant is phytochemically complex and synergistic, additional synergy emerges from and is compounded from chemical plurality (matrixes of potentially thousands of phytochemicals) when multiple diverse plants are in formulation together. Synergy is further compounded when formulations of multiple whole crude plants interact with other complex systems such as humans (Mills & Bone, 2000; Niemeyer et al., 2013; Spelman, 2006b; Spelman et al., 2006). Phytochemical synergy, or synergy within the plant and between plants in combination, can be potentiating, attenuating, or stabilizing. Synergy can also include physiological phenomena. Physiological synergy is when plant constituents act together to
enhance the pharmacokinetic effects and reduce adverse reactions or side effects (Ganora, 2009; Niemeyer et al., 2013; Spelman et al., 2006; Spinella, 2002).

Phytochemicals have evolved from adaptation to their environments over time and exist in mutually dependent relationships both structurally and functionally. Likewise, plant adaptation is ongoing with each plant a reflection of the air, soil, water, climatic conditions, and conditions of harvesting. Therefore, phytochemical synergy is an evolutionary strategy and the effects of whole plants (entire medicinal portions) are different and potentially greater than the effect of individual constituents or when the chemicals components are separated, isolated or extracted out as parts (Brinker, 2004a; Ganora, 2009; Niemeyer et al., 2013; Spelman et al., 2006).

Complexity in plants is greatest when the plant is in its natural intact state. Complexity lessens the further away from this state the plant is taken. Medicinal plants are most complex when used immediately from their natural habitat as fresh and structurally intact. Therefore, herbal medicines with the least processing are more complex than those herbal medicines with more processing. Dried herbs, simple teas, or extracts while less complex than the fresh plant are more complex than herbal preparations that have undergone multiple chemical purification steps, reduction to extracts, or concentrated subfractions (Brinker, 2004a). For a summary of herbal medicines as complex systems refer to table 1.
TABLE 1. Plants as Complex Systems

<table>
<thead>
<tr>
<th>Plant Synergy</th>
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<tbody>
<tr>
<td>• When the effects of the whole plant as intact chemical matrix are greater than</td>
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<td>the effects of individual constituents, additive, or polyvalent effects of individual</td>
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<td>constituents (Ganora, 2009; Niemeyer et al., 2013; Spelman et al., 2006).</td>
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<tr>
<td>• Healing emerges from the relationship and interaction of the parts and cannot be</td>
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<tr>
<td>predicted from what is known about individual plant constituents (Ganora, 2009; Niemeyer et al., 2009).</td>
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<tr>
<td>• Synergy arising from interaction with humans is potentiating, attenuating, and</td>
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<tr>
<td>physiological or complementary (Ganora, 2009; Niemeyer et al., 2013).</td>
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<tr>
<td>• Supports the traditional use of crude plant parts with minimal processing in</td>
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<td>multiple plant formulations.</td>
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<th>Plants Coherently Coupled with Humans from Environmental Coadaptation</th>
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<tr>
<td>• Interactive coevolution has joined the dynamic complex human with dynamic</td>
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<td>complex plants in structural congruence or coherent coupling (Spelman, 2006b).</td>
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<tr>
<td>• Accounts for structural changes in both organisms related to information</td>
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<tr>
<td>exchange and interactions over time (Spelman, 2006b). Plants shaping humans (Spelman, 2011).</td>
</tr>
<tr>
<td>• Resulted in a broad range of safe herbal medicines in use today (Duke, 2000; Spelman, 2006b).</td>
</tr>
<tr>
<td>• May account for deep body-knowing of herbal medicine in humans (Duke, 2000; Niemeyer et al., 2013).</td>
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<tr>
<th>Nonlinear Healing Causality with plants: Indirect and Bidirectional</th>
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<tr>
<td>• Nonlinear or indirect interactions between plants and humans result in small or</td>
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<td>local perturbations yielding global nonspecific effects and emergent coherence.</td>
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<td>The global feeds back into the local, with network and bidirectional information</td>
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<td>flows modifying aggregate behaviors and characteristics (Spelman, 2011).</td>
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<td>• Herbal medicines have multiple low affinities providing multiple modes of activity in contrast to</td>
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<td>single targets with high affinities (Spelman, 2011).</td>
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<td>• Address the root of human dysfunction or imbalance and to a lesser degree the</td>
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<td>alleviation of local symptoms through affecting self-organization (Klein &amp; Dunkel, 2003; Niemeyer</td>
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<td>et al., 2013).</td>
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<tr>
<td>• Reflected in traditional language of herbal classifications used in WHM such as adaptogen,</td>
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<td>alterative, or tonic (Mills, 2005; Niemeyer et al., 2013).</td>
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<th>Plants as Compounded Complexity</th>
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<tr>
<td>• Complexity is compounded with multiple plants in formulation.</td>
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<td>• Phytochemical plurality supports complexity (Ganora, 2009; Kitano, 2004).</td>
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<td>• Complexity is compounded within the dyad of the social encounter of</td>
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<td>practitioner and patient that is embedded in social and environmental relational networks (Niemeyer</td>
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<td>et al., 2013).</td>
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Medicinal plants and humans are complex systems that are coupled through coevolution in time and space, which has resulted in an interactive mutuality. Therefore, plants and humans are interactively linked, enfolded, and inseparable where changes in one prompt changes in the other (Spelman, 2006b). The recursive effects of the interaction between plants and humans have led to mutuality, reciprocity, and interdependence. Humans, as open, dynamic, and self-
organizing systems in evolutionary interconnection with the environment or plants, have become self-eco-organizing systems (Morin, 2008).

In complex systems science, chronic disease can be considered a loss or reduction of complexity and representative of stuckness or crystallization within a pattern in relation to disease attractors or the inability to transform out of a disease attractor to health (A. M. Hayes, Laurenceau, Feldman, Strauss, & Cardaciotto, 2007; Koithan et al., 2007). The use of complex herbal medicines in individual formulations has the implicit intent to provide the impetus or perturbation to move the trajectory of chronic disease by shifting dynamics globally and locally (Kitano, 2004), thus supporting human complexity and wellbeing (Kitano, 2004; Young & Chapman, 2007). In other words, complex adaptive humans use information in complex herbal medicines to self-regulate. Wellbeing emerges from the interaction between treatments of complexity and human complexity encompassing and extending beyond locality and the particulars to the global (Bell, Koithan, Gorman, & Baldwin, 2003). Healing in complex systems is a transformative process of the whole system (Koithan et al., 2007).

The individual formulation of whole plants in the treatment of chronic disease is a psychosocial interactive process between practitioner and patient. The social processes of healthcare encounters expressed within the dyad of practitioner and patient encompass information and energy exchanges where meanings are “embedded in human communication” (Bond, Valente, & Kendall, 1999). Complexity of the plant and the human is repeated in the social dyad. The healing approach within the dyad is comprised of the mutuality of persons in interaction with the environment; specifically, plants in the everyday-lived experience of the herbal practitioner and the patient. This manifests as a network with mutual bonds between healer, plants and patients. Healing in the social–environmental context is further explained with
the concept of entanglement, which refers to the interconnectivity of complex dynamic systems where information is transferred between systems affecting nonlocality of self-organization (Hyland, 2003). Entanglement can potentially exist between patient, practitioner, and therapy or plants (three-way) and is not dependent on awareness (Hyland, 2003). This study is located in the intersection of the interactive social reality of the herbal practitioner-patient dyad and plant medicine.

Summary

CAS, NLDS and Social network theories provide a framework for understanding the use of whole medicinal plant preparations as whole systems in formulation to treat chronic disease. The complexity of plants is related to the interaction and synergy of multiple chemical constituents present as a unified gestalt or matrix in the natural plant structure and processes that reflect adaptation and self-organization. Complexity in plants is compounded when multiple plants are used together in formulation and within complex human systems. Complexity is compounded in the social dyad of the interaction between herbal practitioner and the patient.

Problem Statement

Herbs, as a therapeutic modality, are currently studied from the biomedical perspective with the intent to understand singular mechanisms of action of standardized products for self-prescription or use in integrative healthcare. This current state of the science on herbs focuses on active ingredients, isolated fractions, and patented extracts of single or compounded herb extracts. In addition, clinical research focuses on herbal products wherein a single herbal remedy, using uniform treatment protocols, is prescribed for everyone with a particular symptom or disease. However, this view of herbs as a therapeutic modality is not consistent with the traditional philosophical assumptions and beliefs about herbal medicine and the health care
practices of traditional whole system WHM. As a whole system of medicine, WHM reflects a complex systems approach to herbal therapies as well as the human health/illness experience.

There is little documentation on the clinical approaches of WHM practitioners using crude medicinal plant parts in complex individualized formulations to treat chronic disease. The process of formulating multiple crude plants as herbal medicines tailored to the individual is unexplored. Research has not documented the context, influences, decision-making, intentions, and considerations of herbal practitioners while formulating individualized medicines. Research that locates herbal medicine within the context of holistic traditions and time-honored healing practices offers relevance and new insights into the safe use and the therapeutic value of traditional herbal medicine.

**Purpose of the Study**

The purpose of this qualitative study is to develop a grounded theory that explains the basic social psychological process (BSPP) that WHM practitioners use when formulating or tailoring crude plant medicines to individuals in the treatment of chronic disease. This foundational research in herbal medicine will begin to document the clinical approaches and practices of WHM practitioners in the US by exploring the knowledge, skills, and processes of formulating individual herbal medicines.

**Study Aims**

This study will develop a grounded theory that explains how WHM practitioners formulate crude plant herbal medicine for individuals with chronic disease through:

1. Examining concepts of health, illness, and symptom presentation by:
   a) Exploring informational needs, assessment, and diagnostic processes of practitioners.
b) Exploring the role of herbal practitioners in the patient encounter and formulation process, and
c) Exploring plant-related factors necessary for formulation.
d) Identifying, describing, and explaining the impact of BSPP involved in tailoring crude plant herbal medicines to patients.
e) Identifying and explaining social-structural processes involved in tailoring crude plant herbal medicines to patients.

2. Exploring, describing, and explaining factors that mediate and moderate the BSPP of tailoring crude plant herbal medicines by WHM practitioners by:
a) Exploring and describing influential personal characteristics,
b) Exploring and describing influential professional characteristics, and
c) Exploring and describing influential environmental characteristics.
d) Comparing and contrasting the BSPP of tailoring crude plant herbal medicines based on personal, professional, and environmental characteristics.

3. Comparing and contrasting the BSPP of tailoring crude plant herbal medicines to the current state of the science of herbal medicine by identifying areas of convergence and divergence between whole systems of herbal medicine based on traditional knowledge and herbs used as an evidence-based therapeutic modality.

**Significance**

In 2011, 38% of adults in the US used complementary and alternative medicine (CAM) within the last year. The most frequently used CAM was herbal products and other dietary supplements (NCCAM & AARP, 2011). This represents widespread use of CAM, an increase in use (Gahche et al., 2011; NCCAM & AARP, 2011), and potentially an increase in out-of-pocket
money spent on CAM. In 2007, US adults spent $33.9 billion out-of-pocket on CAM products and visits to CAM practitioners. Forty-four percent of out-of-pocket costs were for nonvitamin, nonmineral natural products, including herbal medicines (Nahin, Barnes, Stussman, & Bloom, 2009). Of the persons using CAM in 2011, only 42% disclosed CAM usage to their primary health care providers and information on CAM was primarily from family, friends, or the Internet. Furthermore, CAM use was primarily for general wellness, pain related concerns, and other specific health conditions (NCCAM & AARP, 2011). Clearly, patients are negotiating CAM, including self-treatment with nutritional and herbal supplements, at increasing frequencies. There is often little guidance from within conventional healthcare (NCCAM & AARP, 2011).

Nurses have the potential to consult with patients and evaluate CAM treatments that are safe, cost effective, and credible, and to prescribe or make recommendations. Registered nurses and advanced practice nurses with expanded roles as practitioners of WHM with knowledge of CAM, traditions of herbal medicine and evidence-based phytotherapy, can potentially fill this void. For this to take place, nurses need the ability to differentiate between the use of herbs from an evidence-based treatment modality perspective and the perspective of WHM as a whole system of medicine.

Nursing is a natural fit with WHM because of the blended and transdisciplinary approach to knowledge in nursing as well as the historical relevance of herbal medicine to nursing. Prior to being organized as ‘nurses’, nursing was performed independently and individually, frequently with the use of traditional preparations of herbal medicines (Libster, 2004). Florence Nightingale and her associate carried medicine bags containing multiple herbal medicines (Nightingale-Museum, 2006). Likewise, Nightingale’s (1859/1992) teaching of putting the “…patient in the
best condition for nature to act upon him” (p. 75) reflects a belief in the healing power of nature, an influence of the botanical movement of the 1800s. Traditions of herbal medicine are embedded in nursing practice.

The unitary-transformative ontological assumptions in nursing science, with similar tenets to CSS, place nursing within the human-environment-health processes where the human is whole and complex, dynamic, self-organizing, and in rhythmically patterned connection with their environment (Bell & Koithan, 2006; Fawcett, 1993; Newman, 1992). WHM, while focused on both natural and social environmental connections, is also located in the human-environment-health process and shares these ontological assumptions with nursing. Knowledge of herbal medicine in nursing expands the nursing role in the human-environment-health processes.

This study will begin to research approaches and practices based on traditional knowledge in WHM and document a whole system of medicine. There is a danger that a linear, reductive approach to herbs as a treatment modality will obscure the integrity of WHM, a potential loss to the healthcare community and society as a whole. This study will improve the understanding of WHM and enrich comprehension of human-environment-health-healer processes for nursing. Furthermore, research in WHM may potentially elucidate contributions to healthcare and build collaborative partnerships, acknowledging contributions from both bioscience and empirical tradition.

**Summary**

Whole systems of medicine are grounded on theories and practices that have evolved separately from conventional Western medicine with beliefs and experiences handed down to each generation over time from indigenous cultures (NCCAM, 2010). WHM is a whole system of medicine rooted in traditional knowledge that includes the unique practice of tailoring crude
plant herbal medicines in polyherb formulations to individuals to promote deep global healing and wellbeing. This is distinct from a pharmaceutical approach to herbal medicine where single-species, uniform herb products are used similar to and as substitutes for drugs. The exclusive application of the biomedical model to research on herbs has resulted in the creation of a new evidenced-based herb supplement industry with little resemblance and marginal relevance to WHM (Mills, 2011). Research in WHM, not dependent on positivism and post-positivism, will in the long run bring WHM into science. The focus will then shift from “if the herb works” to “for whom this holistic treatment works”. It is only with an appreciation of contextualized subjective knowing, traditional knowing, and ecological earth-centered knowing that WHM will flourish. This foundational research will explore the process by which WHM practitioners formulate individual medicines for persons with chronic disease.

The following chapter will discuss the literature review of the state of the practice and the state of the science of WHM by reviewing discipline-specific literature with a manual literature search and with a search of scientific literature using electronic databases. Following a synthesis of the literature, chapter three will conclude by addressing the gaps in the literature and the necessity of constructing practice-based theories.
CHAPTER TWO: LITERATURE REVIEW

To explore the state of the science on individual formulation in Western Herbal Medicine (WHM) for the treatment of chronic illness, a review of the literature was first conducted on the state of the practice of WHM. For the purposes of this search, state of the practice of WHM was defined as characteristics and patterns of WHM practice. Furthermore, practice patterns include the clinical processes of assessment and diagnosing, polyherb formulation and the clinical practice including and relating to the treatment of chronic disease as expressed in WHM literature.

A second literature review was completed on the state of the science of WHM. State of the science of WHM was defined for this search as knowledge that is systematically acquired on WHM as a distinct entity or clinical discipline. The state of the science review is inclusive of clinical practice and research relevant to the practice of WHM, including effectiveness or efficacy literature with evidence on outcomes supporting the practice of WHM. This review of the state of the science will not address research on herb preparations such as standardized products of active ingredients, isolated plant fractions, purified compounds, or herb constituent analysis. Nor will it be an inclusive review of studies related to any one particular herb or herb preparation.

State of the Practice

To evaluate the state of the practice in WHM, textbooks, instructional information and professional journals reflecting the practice of WHM were reviewed. The texts and instructional information reviewed were authored by practitioners and teachers of WHM and are used as a standard for study of WHM in certification and degree educational programs. All texts were authored by one or two WHM practitioners and were written from personal experience,
traditional knowledge, and practice assumptions or beliefs. While several herbalists practicing
WHM have authored family and self-care herbals and herb-specific books reflecting traditional
and experiential knowledge, these books were not included in this review. Also not included
were books on the history of WHM, those specific to herbal medicine safety and drug
interactions, books exclusively written on materia medica, or herbals authored by medical
physicians or those intended for naturopathic physician education. Six texts (Bone, 2003;
Hoffmann, 1990, 2003; Mills & Bone, 2000; Trickey, 2003; Wood, 2008), one instructional
syllabus (Moore, n.d.), and one conference proceeding (Yance, 2011a) on WHM authored by
WHM practitioners were reviewed for a state of the practice evaluation.

**Descriptions of Practice**

The state of the practice includes practice characteristics and practice patterns. Practice
patterns include clinical processes such as assessment and diagnostic activities and formulation,
as well as processes described as clinical practice within the literature. Characteristics of the
patients, practitioners, and practices of WHM are not addressed in the practice literature of
WHM in the US. However, general characteristics of the patients treated can be assumed from
examples of treatments given in the literature. Requisite knowledge and knowledge expectations
of practitioners are also addressed in the literature. The differential clinical practices of WHM,
deﬁned as the use of whole plant extracts in polyformulas with individualized treatment
protocols, will be explored. Furthermore, the practice has been described as using a diagnostic
focus on holism and constitution, with a treatment focus on the cause, supported by an emphasis
on diet and lifestyle (Klein & Dunkel, 2003). This description of WHM is consistently reﬂected
in the literature originating from within the discipline.
Characteristics: Patient Profiles

The literature in WHM includes exemplars of patients treated, formulas used, and reports of follow-ups and outcomes. The patient populations treated are diverse and not restricted. While the expertise or comfort level of the practitioner may limit some WHM clinical practices, the literature shows treatment of acute and chronic disease, adults, children, geriatrics, and pregnant patient populations. There are specific books on WHM addressing particular populations and diseases such as pediatrics (Bove, 1996), women’s health (McQuade Crawford, 1996, 1997; Weed, 2002), and cancer (Yance, 1999). To this point, there has not been a systematic investigation or reporting of the characteristics of WHM practitioners, patients, or practices. Little is documented on case-mixes and demographics of WHM clinical practices.

Characteristics: Practitioner Knowledge

While knowledge in WHM is described as being experience-based, handed down from previous generations of herbalists, and inclusive of modern bioscience, practitioners are expected to come into the study of WHM with prior knowledge of Western theories of anatomy, physiology, pathophysiology, microbiology, and pharmacology (Bone, 2003; Hoffmann, 1990, 2003; Mills & Bone, 2000; Moore, n.d.; Wood, 2008; Yance, 2011a). Models of Western bioscience are integrated but not reviewed or explained in the herbal medicine textbooks. Content of the texts assumes prerequisite knowledge with the exception of Trickey (2003). This text provides extensive explanation of anatomy, physiology, and pathophysiology.

Essential knowledge in WHM is that of single herb characteristics along with knowledge of the healing process. Herbal knowledge includes patterns of plant growth, harvesting, and medicinal preparation, along with how the herbs work, the history of use and classifications, what the herbs are for, how to best combine the herbs, and how to safely use them. A major
portion of the herbal texts reviewed included specific educational information on single herbs or materia medicas (Bone, 2003; Hoffmann, 1990, 2003; Mills & Bone, 2000; Trickey, 2003; Wood, 2008). WHM is described as being an “ecological process” that uniquely connects both the practitioner and the patient to the environment of plants. Herbalism is defined as “…an exploration of humanity’s interactions with the plant kingdom” and includes “all the experience and wisdom born of this relationship between humanity and plants” (Hoffmann, 1990; 2003, pp. 8,10).

Within the WHM literature, healing is described as process that is transformative (Hoffmann, 1990). Health is a positive, active, and inherent characteristic of the integrated human being within the process of coevolutionary mutualism (Hoffmann, 2003). Wellness has been referred to as self-organization (Mills & Bone, 2000). Furthermore, ill-health is described as a whole person expression and potentially a failure to adapt (Mills & Bone, 2000). Healing and wellbeing are invariably linked to the innate and inherent capacity for self-healing (Bone, 2003; Hoffmann, 1990, 2003; Mills & Bone, 2000; Moore, n.d.; Trickey, 2003; Wood, 2008; Yance, 2011a). There were no descriptions differentiating the treatment of chronic disease from acute disease, using the Western medical terminology of “acute” and “chronic disease”, even though multiple exemplars of herbal treatment of acute and chronic disease were given.

**Practice Patterns: Assessment, Diagnosis and Treatment**

Practice patterns were consistently described as individualized, whole person approaches where the whole person is treated within their context (Bone, 2003; Hoffmann, 1990, 2003; Mills & Bone, 2000; Moore, n.d.; Trickey, 2003; Wood, 2008; Yance, 2011a). WHM practitioners are healthcare providers that consult with patients to assess, diagnose, and treat. Assessments are framed in a phenomenological approach combined with a biomedical approach (Hoffmann,
Case notes are referenced in all the texts reviewed with examples given. Case notes include information exchange on health history, review of specific organ system function, current health situation, family, work, nutrition, habits, lifestyle, beliefs, and self-care experiences with the intent to evaluate inherent strengths, weaknesses, and patterns of accommodation or functional adaptation along with the disorder, dysfunction, or imbalance (Hoffmann, 2003; Mills & Bone, 2000; Moore, n.d.; Trickey, 2003; Yance, 2011a). Descriptions of specific assessment data and how to obtain it were not included in the herbal texts except with case examples of patient related information.

While a Western model of anatomy and physiology is combined with diagnostic terminology of conventional Western medicine, it is blended and reinterpreted using WHM concepts of holism, constitutionalism, and vitalism (Hoffmann, 2003; Mills & Bone, 2000; Moore, n.d.; Trickey, 2003; Yance, 2011a). The WHM practitioner is evaluating or diagnosing overall tendencies from the perspectives of multiple causation and that one disharmony or imbalance affects multiple levels of experience (Hoffmann, 2003; Mills & Bone, 2000; Moore, n.d.; Trickey, 2003; Yance, 2011a). Tendencies might be current patterns of dysfunction accompanied by particular symptoms or they may be tendencies that have manifested or are recurrent over the course of years or a lifetime and are considered an inherent part of the whole individual (Hoffmann, 2003; Mills & Bone, 2000; Moore, n.d.; Trickey, 2003; Yance, 2011a). Constitutionalism and vitalism are defined (see Chapter one), yet there is a lack of information on how to assess, evaluate, or determine a person’s constitution or vital force.

The intent of therapy with WHM is foundational to how herbs are used by the practitioners. The overall goal in WHM is to strengthen or tone and increase organization and balance (Hoffmann, 1990, 2003; Mills & Bone, 2000; Moore, n.d.; Trickey, 2003; Wood, 2008;
Yance, 2011a). In addition, the concepts of flow or transport and toxicity are recurrent in the descriptions linked to the intent of therapeutics. In part, the WHM practitioner aims to use herbal formulations to move fluids, cleanse, and reduce toxicities, release stagnations, and balance and restore functioning. (Mills & Bone, 2000; Moore, n.d.; Wood, 2008). The aim of treatment in WHM for Mills and Bone (2000) is further defined as mobilizing self-repair for robust health by optimizing vitality, neutralizing the cause, and controlling the symptoms.

**Practice Patterns: Formulation**

Herbal medicine formulation, while traditional, is practiced distinctly in WHM. Exemplar formulations and recipes are consistently addressed in the texts with most formulations consisting of, but not limited to, four to six herbs. While the texts provide expert examples of polyherb formulations with explanations and rationale, there are only three instructional descriptions of the process of formulation. Each author agrees that for a formula to be effective it must be applied using a rational defined system of evaluation, diagnosis, and treatment. Furthermore, each author acknowledges that multiple perspectives and systems of evaluation and diagnosis have been developed within systems of medicine. This allows for the use of different assessment and diagnostic tools and methods. While the descriptions of formulation represent different levels of perspective, holism, vitalism, and a dynamic synthesis of holism and vitalism, the descriptions are overall consistent. Interestingly, each author’s perspective demonstrates perspectives originating in the educational processes of geographic areas. Hoffmann, while in the US for the past 20 or more years, received his education in the UK. Moore was from the Southwest US; and Mills and Bone are from the UK and Australia. While the roots of WHM are consistent country-to-country and there has been and continues to be a sharing or knowledge
transaction in herbal medicine between different countries, differences in perspectives and emphasis can be found in the practice of WHM from country to country.

Hoffmann (2003) advocates a holistic perspective in WHM, describing the process of herbal formulation as the selection of appropriate herbs for the person where the herbal actions have affinity for target systems or tissues. Initially, diagnostic identification and interpretation of the patterns or processes of interest is performed with the evaluation of symptoms and underlying causes. Then, the practitioner selects herbal actions to address the pattern and chooses relevant herbs with both beneficial primary and secondary actions. Additionally, tonic herbs would be selected to benefit the person, globally, based on system affinity. Finally, any lifestyle, complicating factors, biochemical predispositions, or contraindications would be considered with herb selection. The overall process is described as intuitive (Hoffmann, 1990, 2003).

Moore (n.d.), reflecting a vitalistic perspective, describes the use of Western physiology as a basis of “wholistic differential evaluation” and herbal therapeutics. Using Western physiology and constitutionalism, he describes a formulation process (p.4). Symptoms of organ pathology are defined as belonging to the categories of excess or deficiency. With states or processes of excess, herbs are used to cool. With deficiency, stimulating herbs are used. Moore continues to describe patterns of stress and patterns of fluid transport as being either processes of excess or deficiency. He has further developed a template of herbal energetics which organizes medicinal herbs according to system and tissue affinities along with the degree of effect and particulars of the heating (stimulating) and cooling properties of specific herbs.

The final description of polyherb formulation breaks the process down to linking herbs by their actions to the goals of therapy and the constitution of the person. This description is consistent with a dynamic synthesis of holism and vitalism (Bone, 2003; Mills & Bone, 2000).
The intent of herbal therapy, to mobilize self-organization or self-repair, is achieved though the implementation of the goals of formulation. Goals of formulation include increasing vitality to optimize resistance, neutralization of predisposing and sustaining causes, promotion of healthy tissue, organ and system functioning, and controlling the symptoms. Goals are further defined as individually improving nutrition/digestion and enhancing detoxification. Every formulation includes whole-body medicines such as tonics or adaptogens and physiological enhancement. Finally, herbs are selected based on consistency with the person’s constitution (Bone, 2003, pp. 27-28; Mills & Bone, 2000).

Each description of the process of individually formulating herbal medicines could be interpreted as a general approach to formulation and be reduced to a formula containing one tonic herb, two herbs for symptom management, one herb to treat the cause, two herbs to assist in metabolism, digestion or elimination, and/or one herb to address stress. While Moore’s system is a unique expression of a traditional approach to the tailoring of herbal medicines to the constitution of the person, none of these explanations provide a complete description of an applicable process of individualized polyherbal formulation and it is undocumented what the actual experiential process of herbal formulation is.

**Practice Patterns: Clinical Practice and Chronic Disease**

Literature most reflective of the clinical practice of WHM in the US is found in the *Journal of American Herbalists Guild*. This is a peer-reviewed journal published by the professional guild representing many practicing herbalists in the US. The goal of the American Herbalists Guild (AHG) is to broadcast the “…clinical tradition, skills, and knowledge of herbal wisdom…” currently relevant to the clinical and professional application of herbal medicine (Guild, 2011, p. 1). While additional excellent journals are published in the US on WHM, they
are not peer-reviewed journals and, consequently, may reflect the perspectives and agendas of the journal editors or publisher. Likewise, HERBALGRAM, the journal of the American Botanical Council, is a peer-reviewed educational journal that reports on research on herbs including ethnobotanical studies and product specific studies. This journal is not particular to the practice of WHM and so was not included in this review.

A manual search of herbal literature published in the Journal of American Herbalists Guild was conducted. Journals published from 2000 to 2011 (vol. 1 no. 1 to vol. 10 no. 1) were explored for evidence of traditional knowledge, descriptions of the how WHM practitioners practice, treatment approaches employed, and how formulations of herbal medicines are derived. This review also included how chronic illness is treated and which illnesses are treated. Articles addressing clinical practice, formulation, and herbal therapeutics were included. The search excluded articles published on mechanism of actions, herb monographs, history of herbal medicine, those not authored by practicing herbalists, non-Western systems of herbal medicine, and ethnobotany.

Thirty-seven out of 181 journal articles met inclusion criteria for review (see appendix A). Seven of these were survey results from AHG professional members on single herbs used in formulation with chronic or acute disease (A. Romm & Gardiner, 2004; A. Romm & Romm, 2010; A. Romm & Treasure, 2001, 2002a, 2002b; A. Romm, Treasure, & Upton, 2003; A. Romm & Upton, 2004). Of the 37 articles included, 14 were case reports (Bove, 2001, 2004a, 2004b; Brinckman, 2007; Cabrera, 2005; Caldecott, 2000; DiPasquale, 2001, 2011; Rhoads, 2005; A. Romm, 2001, 2004a; Snow, 2008; Stansbury, 2001; Yarnell, 2001) and 16 were general information articles on herbal practice, including formulations (Bergner, 2008; Bone, 2001, 2002; Frances, 2002; Hedley, 2002; Holden, 2011; Karel, 2009; Khalsa, 2005; A. Romm, 2004b,

Synthesis of the Literature

While extensive heterogeneity was evident in the herbal medicine literature, content related to clinical practice, chronic illness, and formulation of herbal medicines was consistently addressed in every Journal of the American Herbalists Guild publication. Earlier publications (2001-2004) tended to have more case reports and surveys than later publications, which included more practice-related educational material.

The consultation process is repeatedly described and organized in biomedical terminology pertaining to data acquisition with history taking and review of systems (Bergner, 2008; Bove, 2001, 2004a, 2004b; Brinckman, 2007; Cabrera, 2005; Caldecott, 2000; DiPasquale, 2001, 2011; Rhoads, 2005; A. Romm, 2001; Snow, 2008; Stansbury, 2001). Disease etiology and causation were discussed throughout using Western biomedical concepts of biology and pathophysiology along with vitalistic or constitutional concepts (Bove, 2004a, 2004b;
This demonstrates a Western biomedical understanding of disease compounded with holistic or constitutional assumptions. The case histories indicated most persons came to the herbal consultation with a diagnosis or obtained one soon after from either a medical or naturopathic physician. Six of the case history reports were authored by naturopathic physicians practicing WHM (Bove, 2001, 2004a, 2004b; DiPasquale, 2001, 2011; Stansbury, 2001) and two were authored by a medical student who also practiced as a WHM practitioner (A. Romm, 2001, 2004a). The case reports authored by naturopathic physicians and the medical student were shorter with less information on the consultation process than those case reports by herbalists. Exams were reported in four case histories with one being an examination of laboratory results (Bove, 2001, 2004a; A. Romm, 2001; Snow, 2008). No physical examinations other than vitals were reported. Extensive holistic subjective data such as information on lifestyle and diet were obtained in all reports.

Herbal practitioners also employed a variety of therapeutics to treat patients including diet recommendations and nutritional supplements, physical therapy, life-style coaching, massage, essential oil or flower remedies, homeopathy, and on one occasion Traditional Chinese Medicine formulations. Follow-up consultations were ubiquitous. Well-being is defined in one article as balance (DiPasquale, 2001) and healing is depicted as a process in all case histories. Chronic diseases treated in the context of WHM are in Appendix A.

Herbal concepts originating in traditional knowledge were present to different degrees in 34 of the articles on herbal therapeutics and included: traditional herb classifications, characteristics, singles differentiated from polyherb formulas, topical applications, herbal
synergy, constitutional or energetic prescribing, and causal treatments differentiated from local or treatments of symptoms. Formulation, tincture preparation, and topical applications were the primary preparations of herbal therapeutics and formulation was addressed as matching herb energetics with the individual’s constitution (Frances, 2002; Hedley, 2002; Holden, 2011; Rhoads, 2005; A. Romm & Upton, 2004; Snow, 2008; Stansbury, 2002; Wood, 2007). Treatment goals were individually focused and consistently addressed the cause of the condition as well as symptom expressions. Herbal actions and rationales for use were described with language and concepts from traditional knowledge (ie: adaptogen, nervine, digestive, stimulant) with the role of herbs reported as supportive, balancing, strengthening, healing, and cleansing. A summary of the review can be found in Appendix A.

**Summary**

The review of herbal medicine texts and peer-reviewed literature reflects the characteristics of traditional knowledge in the treatment of chronic disease with the use of crude plant parts in individual formulations designed to treat the whole person and the root or cause of the chronic disease. While there is some information on the knowledge expectations in WHM, the clinical consultation process, and herbal therapies, there are few complete descriptions and little information on the actual process of formulation. There are no studies on the treatment of chronic illness by WHM practitioners and there is minimal research originating from this group of practitioners. This study will begin to address this lack of knowledge by exploring the BSPP (including the contextualizing and influencing factors) of tailoring crude plant herbal medicines to individuals with chronic disease used by practitioners of WHM.
State of the Science

To review the state of the science and evaluate systematically-acquired information on WHM as a distinct entity or clinical discipline, a literature search was conducted on research specific to the clinical practice of WHM. An electronic search using the computerized databases PubMed, NCCAM PubMed, CINAHL, and Web of Knowledge was conducted. Key words searched with respective total results are listed in Appendix B. Inclusion criteria were: English language, human studies, full text availability, and Western herbs. The search was limited to the past five years except for a ten-year limit for searches specific to the practice of WHM. Research pertaining to other systems of healing (TCM, Ayurveda), dental, food, and ethnobotanical studies was excluded. Studies pertaining to purified herb extracts, isolated fractions, active ingredients, and patented products were also excluded. The searches for chronic disease management and herbal medicine resulted in a total of 10 different studies meeting criteria. These ten studies were selected for review because they reported on research using whole crude plants in prepared extracts consistent with preparations used in WHM in the treatment of chronic illness. Two of the studies were on practitioner-prescribed individualized polyherb formulations in chronic illness. Research on singular herbs was included if the preparation in the study was a traditional preparation or reflected extract preparations used in WHM. Because the predominant research on herbs is not representative of the practice of WHM, additional searches were conducted to explore traditional practices of WHM (see Appendix B). Five articles meeting inclusion criteria relating to the clinical practice of WHM were selected to further illuminate the state of the science in WHM and chronic illness. A total of 15 studies were found relative to traditional WHM and chronic illness and were included in the state of the science review. All selected studies for this review are tabled in Appendix C.
The Clinical Practice of Western Herbal Medicine (WHM)

Three surveys and one literature review were conducted on the clinical practice of WHM specific to Australia and constitute foundational research on the practice of WHM (Bensoussan, Myers, Wu, & O’Connor, 2004; Casey et al., 2007; Casey, Adams, & Sibbritt, 2008; Evans, 2008). One qualitative study was done with key Western herbalists in Canada to explore responses to product regulation changes and provides insights into the practices of WHM in Canada (Moss et al., 2007). In addition, seven surveys were conducted by the American Herbalists Guild with professional members to ascertain practice patterns related to either specific herbs (Romm & Romm, 2010; Romm & Treasure, 2001, 2002a, 2002b; Romm et al., 2003; Romm & Upton, 2004) or how and what herbs are used with one population (Romm & Gardiner, 2004).

The surveys by Bensoussan et al. (2004), and Casey et al. (2007, 2008), were descriptive of the dimensions of clinical practice of WHM in Australia and validate the range of practitioners, services offered (referrals, prescription and dispensing practices), and practices unique to WHM (consultations and formulation). Bensoussan et al. (2004) concluded that the combination of naturopathy and WHM comprises a substantial contribution to Australian healthcare. They proceeded to describe the demographics, clinical experiences, educational backgrounds, and nature of herbal medicine practices including referral patterns, diagnostic tests used, cost of consultations, herbal preparations, and adverse events from treatments. Out of 859 respondents, 489 used herbalism to describe their practice and 76% of practitioners had overlapping professions or held more than one title. Fifty-four respondents classified themselves as conventional practitioners and 28 of those were nurses practicing WHM. Thirty-eight percent incorporated conventional Western diagnostic tests over 50% of the time and 62% performed
physical exams. Eighty-one percent utilized additional diagnostics such as hair, saliva, or tongue analysis. Fifty percent of the respondents indicated mixing or combining 90% of their herbal medicines used with patients.

Casey et al. (2007) surveyed professional herbal practitioners in Australia in order to describe prescription and dispensing patterns and found that WHM practitioners predominantly prescribe individual polyherb formulations. Following the use of formulations of liquid extracts, the WHM practitioners preferred the use of herbal teas and 82% responded that they used single herbs infrequently. Exploring the clinical practices and perceptions of Western herbalists in Australia, Casey et al. (2008) found that initial consultations with the herbalists are 60 minutes or more with follow-up consultations being 30 to 60 minutes and include case histories with nutritional patterns, physical examinations, and diagnosis. Herbalists also counsel, devise treatment plans, formulate individual herbal medications, and dispense the medication. Most patients seen by herbal practitioners have pre-diagnosed chronic diseases and herbalists prescribe herbal medicines concomitantly with pharmaceutical drugs. Western herbalists refer to conventional practitioners for diagnosis and treatment and encourage full disclosure. While verifying the unique practice of individual herbal formulating, there is no evaluation of the process or approaches used in formulation with chronic disease or the range of chronic illnesses herbalists treat (Casey et al., 2008).

In a review of herbal medicine literature originating in Australia, Evans (2008) evaluated the modernization of WHM and validated the increasing use of biomedical research or evidence-based practice as demonstrated by the greater presence of biomedical terms and concepts from 1989 to 2008. Evans (2008) also verified the presence of traditional philosophies, including vitalism, in the herbal literature and acknowledges the existing tension between scientization and
folk traditions. She concluded that rather than a synthesis of approaches, there is an increasing focus on phytochemistry and clinical trials resulting in traditional herbal knowledge being replaced with modern bioscience. In a study of WHM practitioners in Canada, Moss et al. (2007) documented attempts to professionalize WHM practitioners in response to increasing product regulation. This study, using content analysis of interview transcripts, found that WHM practitioners perceived the product regulations as restricting current practices of individualized treatment with polyherb formulations due to the potential reduction in the availability of whole plant medicines. The external factors of increasing regulation, in turn, have led to increased professionalization with WHM practitioners organizing, taking steps towards defining a body of knowledge, and increasing the legitimacy of the practice in the eyes of the public and conventional healthcare. While this research is valuable for preservation of traditional knowledge of WHM, it is specific to Australia and Canada and is potentially not generalizable to WHM in other geographic areas.

The Australian studies and one Canadian study of WHM are important exploratory studies in herbal medicine. They begin to address a void in the literature and lay groundwork for future research by differentiating herbal practitioner-delivered herbal medicine from herbs designed for self-prescription or herbs intended as a one-to-one replacement for pharmaceuticals. Even though the surveys were new, lacked pre-testing, had low response rates, and had potential for recall bias, each study reported that the focus of WHM in Australia and Canada continues to be the individual, and personalizing polyherbal formulas is a standard of practice. This finding is consistent with traditional knowledge of WHM.

Seven surveys were conducted by the American Herbalists Guild with professional members to explore the range of practice relating to six single herbs (Romm & Romm, 2010;
Romm & Treasure, 2001, 2002a, 2002b; Romm et al., 2003; Romm & Upton, 2004) with one survey specific to practice patterns with pediatric patients (Romm & Gardiner, 2004). The six herbs included in the surveys were *Vitex agnus-castus*, *Echinacea* spp., *Piper methysticum*, *Ginkgo biloba*, *Angelica sinensis*, and *Cannabis* spp.

Overall, the herbs included in the surveys, with the exception of cannabis, were used in polyherb formulations for both chronic and acute disorders. With a response rate of 73 (30%), 55.6% of the herbalists never recommended cannabis, and those that have recommended cannabis did so for both acute and chronic problems and primarily as a single (80%) in liquid extract or tincture form. Polyherb formulation was not included in the survey questions on *Echinacea* spp. Typical combinations used in formulations were given for *Vitex agnus-castus*, *Piper methysticum*, *Ginkgo biloba*, and *Angelica sinensis*.

The pediatric herb survey was specific to types of conditions treated and herbal medicines used. Chamomile, echinacea, ginger, and fennel were the most frequently used herbs with pediatric conditions and children were treated for both chronic conditions such as asthma, eczema, irritable bowel, and ADHD and acute conditions like infections, headaches, gastrointestinal symptoms, colds, and flu. These surveys reflect the clinical practices of WHM practitioners in the US and have originated from within the guild organization representing that group of practitioners.

**Formulations Consistent with Western Herbal Medicine (WHM)**

Five trials and two quasi-experiments using traditional herbal preparations for persons with chronic disease were included in this review. Three studies evaluated the effect of traditional herbal tea preparations as single herbs or in combinations for the treatment of chronic disease (Grant, 2010; Hipps et al., 2009; Picon et al., 2010). One study evaluated a traditional
tincture preparation of a single herb (Wahl, Aldous, Worden, & Grant, 2008) while two articles written on one study highlight two outcomes from a traditional tincture formulation of an herb combination (Brush et al., 2006; Zwickey et al., 2007). The final study reviewed is on a tincture preparation of a single herb and was included because it was authored by practitioners of WHM and is reflective of the empirical learning taking place in the education of WHM practitioners (Clare, Conroy, & Spelman, 2009).

Grant (2010) conducted a RCT of 42 volunteers to evaluate the effect of spearmint tea on hormone levels in persons with polycystic ovarian syndrome. The trial was 30 days and consisted of persons taking either spearmint or chamomile (placebo) tea twice a day. The teas were standardized with instructions on preparation given to each subject. Following analysis with dependent paired t-tests, free and total testosterone levels were significantly reduced in the treatment group; likewise, luteinizing hormone and follicular stimulating hormone were increased. The subjective responses on the Dermatology Quality of Life Index demonstrated significantly reduced perceptions of hirsutism in the treatment group. However, this was not consistent with the objective measure of hirsutism. Overall, the hormonal changes were favorable with the herbal tea and the objective and subjective discrepancy in the measure of hirsutism could be explained by the short duration of the study.

In a pilot study by Hipps et al. (2009), a combination herb tea (Glycyrrhiza glabra, Eucalyptus globulus, Foeniculum vulgare, Asclepias tuberosa, Biyan pian [extract of 11 herbs], Mentha peperita, Calendula officinalis, and Zingiber officinale) was used with 55 African American volunteers for six weeks to see if subjective symptom reports of chronic sinusitis improved. The standardized tea was administered two, three, or four times a day and subjects were seen by a healthcare practitioner at two-week intervals for additional tea supplies. Both the
Chronic Sinusitis Survey (CSS) and the Short Form-36 measuring overall health status were administered. The results demonstrated that following the six weeks, the four times a day tea group had significantly reduced sinus symptoms with improved health quality of life compared to baseline.

A tea containing a traditionally-used combination of *Pimpinella anisum*, *Foeniculum vulgare*, *Sambucus nigra*, and *Cassia augustifolia* was studied as a treatment for chronic constipation (Picon et al., 2010). Colon transit time, the number of colon evacuations per day, and the subjective perception of bowel function was assessed in this RCT with a sample of 20. This study was a five-day crossover study with treatment and placebo periods separated by a nine-day wash out period. The resulting difference in mean colon transit time represented a 62.9% improvement with the treatment. Furthermore, the treatment group showed a significant difference in the number of evacuations as of day two and perception of bowel function significantly improved with the treatment. A “few” patients reported diarrhea and colic while receiving the treatment, and serum potassium levels, while still in the normal range, reduced an average of 0.55mEqL.

A tincture of *Echinacea purpurea* roots and seeds was used for 10 days to treat children ages one to five with histories of recurrent otitis media in a placebo controlled RCT (Wahl et al., 2008). Eighty-four children were treated in this study at the first sign of each cold and included the four protocol groups of double placebo, echinacea plus sham osteopathic manipulation, genuine osteopathic manipulation with sham echinacea, or true echinacea and osteopathic manipulation. The findings indicated an association of echinacea with increased risk of acute otitis media with borderline significance. Sixty five percent compared to 41% of the placebo
group experienced acute otitis media. Echinacea three times a day and up to five osteopathic manipulations both failed to reduce the risk of acute otitis media in otitis media prone children.

Two articles addressed the same tincture formulations of *Echinacea purpurea*, *Astragalus membranaceus*, *Glycyrrhiza glabra*, and a combination of all three herbs on the effect of CD25 and CD69 expression in humans (Brush et al., 2006; Zwickey et al., 2007). Brush et al. defined the study as a placebo-controlled, double-blind investigation with 16 subjects in four treatment groups and one placebo group. Peripheral blood draws were completed before the administration of the treatment, after 24 hours, and then in seven days following the initiation of treatment. The treatment consisted of a twice a day dosing for seven days. Immune cell activation, quantified by CD69 expression on CD4 and CD8 T cells, increased with all tinctures within 24 hours of ingestion and continued for seven days. *A. membranaceus* had the greatest effect followed by *E. purpurea*, then *G. glabra*. While immune cell activation reduced after seven days, it stayed higher than baseline with *E. purpurea* and *A. membranaceus*. When used in combination at doses equivalent to the single extracts, the herbs stimulated CD8 T cells within 24 hours for the duration of seven days in an additive fashion or with greater CD69 immune cell activation than with single herbs or placebo. Likewise, Zwickey et al. (2007) reported that CD25 expression on CD4 T cells was significantly increased for those subjects treated with *E. purpurea* with noticeable increases from *A. membranaceus* and *G. glabra*. There was an additive effect on CD25 expression from the combination.

The diuretic effect of *Taraxacum officinale* leaves was studied over a single day by Clare et al. (2009). An 8 ml dose of a tincture (hydroethanolic extract) of *T. officinale* was self-administered three times in one day to 17 subjects. Caffeine and alcohol was restricted through the trial, fluid intake was monitored, and urinary output and frequency were recorded. The
results showed a significant increase in the frequency of urination in the first five hours following the first administration and a significant increase in excretion ratio following the second administration. There was no significant change in any urinary parameters following the third administration.

While considered preliminary and with notable design and/or theoretical challenges, all but the Wahl study had results favorable to herbal treatments used within traditional WHM preparations. Each study was disadvantaged from low sample sizes, potentially reduced power, and short study durations for outcomes measures. Particularly in the Grant (2010) study, there was inadequate time to accurately measure changes in hirsutism in a 30-day trial. The Hipps et al. (2009) study was not a RCT design and lacked randomization and a control group. The preparation of echinacea in the Wahl study (2008) was consistent with WHM preparations, but the plant species, combination of plant parts used, and dosing were not consistent with WHM. In addition, the compliance rate in this study was low. The final analysis in the Wahl study included only 84 subjects with a 73% power to detect risk reductions under the stated conditions. The Clare et al. (2009) study, while supporting the tradition of empirical knowing in WHM education, lacked overall design validity. It was not randomized, blinded, and there was no control. Furthermore, this study relied on self-monitoring and had no control over compliance or nutritional intake during the study period. Despite the limitations, this study is reflective of real life use of herbal medicines and the empirical process of knowing occurring in WHM education.

Outcomes to Individual Formulation

Three studies evaluating patient outcomes and the effectiveness of individual formulation of WHM were reviewed (see Appendix C). Two randomized controlled trials (RCTs) were conducted in the UK, evaluating patient outcomes to practitioner-prescribed individual herbal
therapies for menopausal symptoms and osteoarthritis of the knee (Green, Denham, Ingram, Hawley, & Greenwood, 2007; Hamblin, Laird, Parkes, & Walker, 2008). One systematic review originating in the UK was conducted to evaluate the level of evidence supporting the use of individualized herbal medicine for any indication (Guo, Canter, & Ernst, 2007).

Green et al. (2007) conducted a RCT using personalized formulations for the treatment of menopause. This study was a pilot study and looked at subjective measures of disease outcomes including the whole person outcome scale, Measure Yourself Medical Outcome Profile-2 (MYMOP2), and the Greene Climacteric scale. The interventions were performed by three credentialed phytotherapists with similar practice backgrounds, comparable clinical methods, and an agreed upon treatment format. Individualized formulations were prescribed for a 24-week period along with six consultations with the practitioner. No concurrent hormonal therapy or complementary and alternative therapies were prescribed or used during this trial. Herbal formulations were prescribed following a one-hour initial consultation and adjusted as needed. Fifty-eight herbs were used in the formulations with an average of six herbs per formulation and four formulations per patient. Lifestyle and dietary advice was given in 72% of the consultations. Using a repeated measures analysis of variance and analysis of covariance for data analysis, it was found that treatment by the herbal practitioners with individualized formulations reduced all menopausal symptoms greater than the control group. While both the Greene subscales and the symptom scale on the MYMOP-2 showed clinical improvement greater than the control group, the reduction in hot flushes and the increase in libido were statistically significant. Four subjects reported adverse events (headache, insomnia, catarrh, and loose stools), but all resolved by the following consultation.
Hamblin et al. (2008) conducted a RCT double-blinded pilot study with 20 persons with osteoarthritis of the knee who continued therapy with pain relieving and anti-inflammatory medication during the trial of individualized herbal treatment. Two phytotherapists consulted with the subjects on three occasions over a 10-week period. Using a formulary of 11 herbs, individual herbal formulations were prescribed and altered as needed. Practitioners were blinded to the randomization process and outcome and only the subjects randomized to active treatment received the treatment while the others received a placebo. Subjects were also consistently given diet advice based on the UK Foods Standard Agency and a multiple vitamin, vitamin C, and essential fatty acid nutritional supplements. The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) and MYMOP data were analyzed using paired and unpaired t-tests and showed a decrease in total and subscales of the WOMAC scores that was greater in the treatment group. While differences between group means were not significant, the scores were clinically important. Clinical importance was defined as a 20% improvement in symptoms. The placebo group showed a clinically important reduction in the “stiffness” subscale. The MYMOP scores also demonstrated clinical importance on the “symptom-2” scale with the treatment group showing a greater reduction in symptoms than the control. “Wellbeing” and “symptom-1” scores did not show a difference between groups. Hamblin concluded that individual herbal treatments, prescribed by a practitioner, improved symptoms of osteoarthritis of the knee.

Both UK trials were challenged with small sample sizes and potentially reduced power. The trials were of short duration (ten weeks) and provided no information on the formulation process, but are important as initial studies of herbal medicines reflecting traditional preparations. The osteoarthritis herbal formulations were from a limited formulary of 11 herbs. Although both studies reported favorable clinical trends with individualized herbal medicines,
they failed to describe randomization processes and were most likely underpowered. The question was posed whether the groups were comparable in the Hamblin study (Guo et al., 2007). Both studies indicate the need for larger, longer, pragmatic trials with individualized herbal medicines.

Guo et al. (2007) published a systematic review of RCTs of individualized herbal medication for any indication. Three published trials met the inclusion criteria out of a search of 1345 studies on any system of herbal medicine. Hamblin et al. (2008) was the only study on WHM reviewed. The other two trials were on Traditional Chinese Medicine. Because of insufficient data, the authors concluded there was a scarcity of evidence on outcomes from individually formulated herbal medicines and further stated there is no evidence to support the use of individualized herbal medicine in any indication.

Synthesis of the Literature

While research on herbs is multidisciplinary and plentiful, the state of the science for the management of chronic illness using traditional WHM is incomplete (Mills, 2011). Research on herbs is predominately ethnobotanical, laboratory, and human study conducted on botanical products of single herb preparations such as standardized extracts, isolated fractions, active ingredients, and patented extracted single constituents. The intent of this research is to understand singular mechanisms of action and to standardize products for the global herb market or pharmaceutical production (Cravotto, Boffa, Genzini, & Garella, 2010; Jagtenberg & Evans, 2003; Tilburt & Kaptchuk, 2008). Research supports the herbal supplement industry, a new evidence-based practice or market separate and distinct from WHM. Product-dependent herbal research, focused on self-prescription and a healthcare model that uses herbs as replacements for pharmaceuticals, is often not generalizable to different products, the whole herb, the herb in
combination, or traditional uses of herbal medicines (Mills, 2011). While acknowledging the potential value of the current body of research on herbs, the demand for research on herbs as a supplement industry has displaced herbs from the context of traditional knowledge of herbal medicine. Consequently, research on medicinal herbs is fragmented and often fails to provide relevance as it relates to the safe and beneficial traditional use of herbal remedies (Mills, 2011).

Research differentiating herbs available in retail markets from herbal medicines prescribed by practitioners is sparse (Casey et al., 2008). The first significant gap in the state of the science is the lack of research and documentation on the clinical practice of WHM including experiences, approaches, decision-making, healing practices, patients treated, intentions, and outcomes in the treatment of chronic illness. There are only practitioner-described case reports on outcomes to treatments of chronic disease with WHM in the US. There are no demographics or descriptions of US WHM practitioner practices available and, as Casey et al (2008) stated, there is a “paucity of reliable data on the clinical practices of WHM” (p. 229).

The second significant gap is the lack of research on the formulation process of crude plant parts and their extracts in the treatment of chronic illness. Formulation of crude plant parts is a central differentiating practice of WHM. While acknowledging and verifying the practice of formulation as a unique practice (Casey et al., 2007), no research done in the UK, Canada, or with Australian herbalists has studied the process. No research on individual formulations of crude plants as a system of healing rooted in traditional knowledge and blended with bioscience has been done in the US to date. This constitutes a gap in knowledge of a traditional healing system currently practiced throughout a significant part of the world.

The third significant gap is the lack of research and documentation on the healing or synergistic effects of polyherbal plant formulations in the treatment of chronic illness and the use
for health promotion. Potential insights and understanding of plant medicine safety, effectiveness, management of disease, and promotion of wellbeing gained from the exploration of WHM are lacking in the literature. Overall, research and dialogue in the US on the practice of WHM has been given short shrift and because of this failure to validate WHM with research, the traditional knowledge of herbal medicine may be lost, engulfed, or transmuted by the global herb supplement industry.

**Summary**

As with any discipline or field of study, theory comprises the building blocks of knowledge and is essential for further study (Reed & Crawford Shearer, 2011). Practice theory as a systematic abstraction provides causal explanations for real-life experiences that, in turn, drive interventions and research (Sidani, Epstein, & Moritz, 2003). Prior to evaluating effectiveness or outcomes of herbal interventions, there needs to be a knowledge base conceptualizing causal mechanisms, which is practice theory (Sidani, Doran, & Mitchell, 2004). It is only with practice theory that the conditions, factors, and modifiable components of the practice are known a’priori, fostering evaluation, research, and practice-related protocols or interventions that are theory-driven (Sidani & Braden, 1998). Theory-driven research assures discipline specific accountability to scientific and societal communities by differentiating WHM from the reductionistic or mechanistic application of herbs and by grounding clinical practices in evidence and knowledge that in turn provides consistency and systematic quality and safety to clinical practice.

Furthermore, with discipline-specific theory, discipline-specific research can follow. It is knowledge development and management that guides both practice and research. Practice theory articulates what practitioners do and adds social value to the field of study.
This study will begin to address the significant gaps in knowledge of WHM clinical practice with a foundational exploration of the basic process of formulation or tailoring crude plant medicines to individuals with chronic disease. The conditions, factors, knowledge, skills, and decision-making surrounding the process of tailoring polyherb formulations to individuals with chronic disease will contextualize a theory grounded in the practice realities of WHM practitioners.
CHAPTER THREE: METHODS

This chapter addresses the design and methods selected for this study. It provides a brief description of the background of Grounded Theory (GT), the theoretical roots, and the advantages of using GT for this study. The procedures for the study, protection of human subjects, and measures that ensured rigor and trustworthiness will also be discussed.

Qualitative Inquiry

Qualitative inquiry is an approach to research that is fluid (Corbin & Strauss, 2008) where truth and reality are dynamic constructions, embedded and contextualized in natural or real life experiences and interactions (Denzin & Lincoln, 2005). Qualitative research provides data that are context rich, resulting from studying persons within their natural environments and allowing conceptualizations and descriptions of human experiences (Munhall, 2007). GT is a qualitative research design that uses a systematic approach as a way of studying social phenomena (Corbin & Strauss, 2008).

Grounded Theory

Background

Grounded theory is an approach used to develop theories of basic social and psychological processes. Basic processes refer to patterns in interactive behaviors occurring over time which are social psychological or social structural in nature (Corbin & Strauss, 2008). A basic social structural process refers to larger societal structures, whereas a basic social psychological process (BSPP) refers to behaviors within a social context (Glaser, 2005). Process is further defined as a series of evolving interactions or sequences occurring and changing over time (Corbin & Strauss, 1990a). Theories grounded in data and rich in social meaning are developed with GT (Corbin & Strauss, 2008). Theories developed from GT may be either
substantive, specific theories bound to person, place, and time or broader formal theories with
greater abstraction. The purpose of this study is to develop a substantive practice-based theory of
the BSPP that Western herbal medicine (WHM) practitioners use when tailoring herbal
formulations to individuals with chronic diseases.

GT was developed by Barney Glaser and Anselm Strauss in the 1960s and while Glaser
never outwardly expressed his philosophical epistemology, he has been associated with
objectivism. In contrast, Strauss (now writing with Juliet Corbin) has been associated with
interpretivism (Hallberg, 2006) and later with social constructivism (Corbin & Strauss, 2008).
Glaser’s insistence on emergence of theory with constant comparison is consistent with a post-
positivist objectivism where reality is discovered and truth resides in the data, not the
interpretation of it (Glaser, 1978, 2002). Induction is the determining process for Glaser (Heath
& Cowley, 2004), whereas Strauss and Corbin are explicit in viewing reality as an interpretation,
thus never fully known, and claim that the philosophy of GT is shared between symbolic
interactionism and pragmatism (Albiabat & Le Navenic, 2011; Corbin & Strauss, 2008).

Theory for Strauss and Corbin is generated through the transaction of researcher and data
(Corbin & Strauss, 1990a; Hallberg, 2006) enabled by axial coding. With axial coding, inductive
reasoning is joined with deductive reasoning (thus abductive reasoning) resulting in the
interpretation of data and formulation of a grounded theory. Strauss and Corbin’s method of GT
was used to develop the substantive theory because the underlying premise that knowledge is
dynamic and socially and situationally constructed, rather than fixed and discoverable, is
consistent with the philosophical perspective and the concepts of complex adaptive systems that
underpin this research.
While not specific to complex adaptive systems (CAS), GT as a tool is consistent with theories of complex systems as expressed in humans with dynamic patterns interconnected and interacting with their environments (Bell, Koithan, & Pincus, 2012). GT represents one way of constructing meaningful reality and knowledge that is contingent on or emerges from the social-interactive process (Crotty, 1998). While GT is a research method grounded in the real experiential world of complex interacting persons, it is a method to study the complexity of whole interacting systems. This study on tailoring herbal formulations to persons with chronic disease is located in the dyadic network and the interactions of the person with the environment where reality is emergent.

**Purpose of Grounded Theory**

The purpose of GT is to explore basic social and psychological processes with the construction of explanatory theory. This involves abstracting from practical lived experiences to concepts and propositions that explain social interactions or processes. There are few practice theories in WHM and little is known about the social process of tailoring herbal formulations to individuals with chronic disease. Qualitative study is a useful starting point with foundational research or research that is enriched with contextual inclusions and variability.

This study was not intended to test or validate existing theories or to interpret personal experiences numerically. It was not restricted to thick description with identification of themes nor was this study intended to explore a unique social culture or meanings of personal experiences. The aim of this study was to explain the BSPP of how herbal practitioners formulate crude plant medicines to persons with chronic disease. This is a BSPP process studied best with GT.
Summary

GT legitimately located this study in the experiential context of the participants allowing for the exploration of depth and detail of concepts, propositions, and contextual and influencing factors. Because of its novelty and uniqueness, the study of personal formulations demanded the exploration and contextual definition offered by interpretative qualitative research like GT. GT offers the potential for information-rich data (Denzin & Lincoln, 2005) that can capture the typical or exemplar and variable experiences of herbal practitioners (Corbin & Strauss, 2008). The BSPP of formulating herbal medicines to persons with chronic disease is an interactive information exchange mediated by intention and meanings. This BSPP is congruent with GT where the circularity of method propagates, extracts, and constructs understanding and distinct meanings from this interactive process.

Research Procedures

Sampling and Data Sources

Theoretical sampling was used in this study. Theoretical sampling is integral to GT allowing for simultaneous or iterative data collection and analysis or the constant comparison process. Theoretical sampling is the purposeful selection of data from a variety of sources based on the emerging theory and proceeds by placating the demands of the emerging theory with data such that data collection revolves around the concepts and categories identified. This immerses the concepts and categories in meaning and propels them forward, in turn directing data collection (Corbin & Strauss, 2008).

Data collection/sampling, analysis, and interpretation continued until saturation was reached. Saturation refers to concept loading and represents completion to data collection (Corbin & Strauss, 2008). The definition of saturation extends beyond that of redundancy and the
implication that there are no new categories or concepts. Instead, saturation denotes full concept and propositional development where cause, context, and consequences of each code or concept have depth and variation. All variations of the codes are explainable within the theory (Munhall, 2007). Data collection and analysis concluded when no new insights into the emerging theory were forthcoming and the properties and dimensions of the categories and concept relationships were fully developed (Corbin & Strauss, 2008; Denzin & Lincoln, 2005; Morse, 1995).

Data sources for this study included participant interviews, interview notes, and literature pertinent to formulation in WHM for final integration. Data source selection was based on the potential to provide the information necessary for the emerging theory.

**Recruitment.** There were two intended strategies for recruitment. One strategy was the utilization of Herbalhall. Herbalhall is an Internet-based server providing an online network for an international group of practicing herbalists. Herbalhall was used, with permission of the host or Webmaster, to access potential contact with information-rich herbal practitioners. An explanation of the study along with a request for volunteers was posted on Herbalhall on two occasions approximately four weeks apart (see Appendix D). Volunteers were asked to contact the investigator by phone or by email. Following contact, possible participants were screened for eligibility. Five participants were recruited through Herbalhall.

The second recruitment strategy utilized existing knowledge of herbalists as key herbalists. Key herbalists known to the principal investigator were contacted by email, introduced to the study with a letter (see Appendix E), and asked if they had knowledge of potential participants meeting inclusion criteria. Three participants were recruited from contact with key herbalists.
The final recruitment occurred when three participants recruited an additional nine participants for this study. One member interviewed took the Herbalhall notification of the study and posted it on an American Herbalist Guild face page she managed, resulting in a recruitment of five participants. One member who had been interviewed previously recruited one participant and one member recruited three participants.

Volunteers contacted the principal investigator by email or telephone. The principle investigator then conducted a brief interview to assure that inclusion criteria had been met. No data was recorded at that time. The information gathered was used for determination of eligibility only and not for analysis. Questions addressed the type of herbal practice, length of time in herbal practice, educational preparation, exemplar of chronic disease treated, and whether the practitioner formulated herbal medicines (see Appendix F). Once eligibility was determined and informal consent obtained, recruits selected were emailed a written statement of disclosure (see Appendix J) and arrangements were made for the interview. All participation was voluntary and participants could terminate participation or refuse to continue at will at any time.

**WHM participants.** The primary data source were participant interviews (n=17) with clinical herbalists. They were selected for the meaningful information they were able to contribute to the emerging theory. Participant recruitment and enrollment proceeded in step with data collection and data analysis. During Phase I of data collection, participants (n=4) were selected using purposeful or theoretical sampling to begin generation of data. These participants were selected from eligible volunteers determined by diversity of educational preparation and years in practice. The intent of phase I was to obtain a general overview of the process of tailoring herbal formulations to persons with chronic disease.
During phase II of the data collection process, 10 participants were recruited and selected using the same criteria as phase I. Eleven interviews were conducted with the 10 participants in blocks of two and three with one participant interviewed on two separate occasions. Data collected during phase II sampling contributed to an expanded understanding of the scope, depth, and variation of concepts central to the process of tailoring herbal formulation, lending definition and elaboration to the categories and emerging theory. Thus, during phase II, the emerging theory mandated and directed who was interviewed and included in the analysis process.

During the final phases of the study (phases III and IV), three new participants were interviewed and 12 previously enrolled participants were reinterviewed with eight participants reinterviewed twice and two participants reinterviewed a third time. Theoretical sampling of data generated from these interviews was done to validate and refine the categories, concepts, and propositions of the emerging theory. This means participants who were selected for reinterviewing had access to specific details that were central to the developing BSPP, including theoretical concepts and mediating/modifying variables. Given that recruitment and sampling was iterative with ongoing analysis, robust concepts and propositions were assured (Charmaz, 2006; Corbin & Strauss, 2008). Twelve participants were intentionally interviewed more than one time to a maximum of three times. A total of 39 interviews were conducted and contributed to the outcomes of this study. Sampling concluded when concept and category saturation was reached (Morse, 2007). Saturation determined the final sample profile.

**Inclusion criteria.** The participants were English-speaking adult practitioners of WHM of both genders and any ethnicity residing in the United States (US). They were all actively engaged in clinical practice no less than five years, either vocationally or as an avocation, and formulated individualized polyherbal medicines using crude plants for patients with chronic
diseases. Participants were able to identify a minimum of one exemplar patient with chronic disease from their practice for whom they had formulated herbal medicines. Participation was limited to practitioners based in the US and included a broad spectrum of traditional herbal practitioners. Participants’ education in herbal medicine was at the apprentice level, informal trade-level training, and from academic, degree-based programs. This included practicing herbalists defined as wise women and wise men or modern folk healers as well as those with the definition of Registered Herbalist. Selection of eligible volunteers reflected herbal medicine education diversity. Educational background was considered along with the additional inclusion criteria of length of time in practice with greater priority given to more years in practice when possible. Practitioners with additional training in other alternative healing systems such as Traditional Chinese Medicine, Ayurveda, homeopathy, naturopathy, nursing, or conventional medicine were included in this study. Volunteers were screened for inclusion criteria by telephone or email following recruitment (See screening for inclusion criteria Appendix F).

**Exclusion criteria.** Participants were excluded for any reason known beforehand that would prevent successful interviewing or follow-up data collection. No participant declined to be audiotaped. Persons not meeting inclusion criteria, such as non-English speaking and those residing or practicing outside of the US, were excluded. One person was declined participation for lack of experience (less than five years), one person was declined due to not formulating, and one person failed to recontact the investigator after she was sent the disclosure statement.

**Hand-written interview notes.** The investigator, from hand-written interview notes, compiled additional data. Interview notes originated from the interviews and included pertinent descriptions, observations of the participant during the interview (when possible), and relevant reflections. Observations included particular language used, expressions, gestures, mannerisms,
and physical expressions of the participant if Skype was used and observations of the interview environment, if pertinent. Interview notes also included personal reflections, thoughts, and considerations pertinent to the data during or following the interview. Note taking continued during the analysis process with ongoing reflections and thoughts of the investigator and were kept with the interview notes.

**WHM educational materials.** The integration of literature related to how herbalists formulate individual herbal medication was completed during the final stages of analysis. Fifteen educational materials from herbal medicine educational programs or national conferences were reviewed. This literature was used to address the congruence and incongruence of the emerging theory with existing educational materials, to enrich and challenge the analysis and supplement validation during the constant comparison process during theory generation (Luckerhoff & Guillemette, 2011). Educational materials were used to integrate and provide additional exploration for the emerging theory of herbal medicine formulation (Charmaz, 2010).

**Materials inclusion criteria.** Educational materials including coursework and conference materials were selected for inclusion based on the context and source of information, the purpose, and the congruence with the principles and assumptions of WHM as practiced in the US. Materials written by WHM practitioners for practitioners of WHM were selected.

**Materials exclusion criteria.** Educational materials were excluded if authored by or intended for naturopathic physicians, doctors of Traditional Chinese Medicine or Ayurveda, or conventional Western physicians. Materials specific to ethnobotany were excluded. Materials were not used for a’priori conceptualizations.
Data Collection Process

Data collection took place in four phases. Phase I interviews were open and unstructured, with participants providing an overview of the formulation process for persons with chronic disease. Phase II interviews were structured and focused on the emerging theory contributing depth, definition, and variation to the theory. The final two phases of interviews refined the theory and confirmed and validated the theory. In phase III, three new participants were interviewed for theory confirmation with 12 participants reinterviewed in phase IV for validation, discussion, and feedback on the emerging theory. A total of 39 interviews contributed to the data. Educational materials were incorporated in phase IV.

Participant Interviews

Setting. Initial interviews were conducted via Skype (an internet visual telephone service) and telephone at a prearranged time and place convenient for both participant and researcher. Follow-up interviews were over Skype and by phone with the final interactions by email.

Interview process. Interviews evolved as the data were collected and analyzed, proceeding from open or unstructured to structured and focused. Person-to-person interviews with herbalists lasted 1 to 2 hours with the initial interviews being an hour and increasing in time as interview process progressed.

Phase I interviews. Initially, interviews in Phase I (four interviews) were unstructured or open, allowing the participant to freely discuss the process of formulation of herbal medicines. Broad open-ended questions were asked in order to explore experiences related to the formulation practices of herbalists. Thoughts were elicited on individualizing treatment of chronic disease, the nature of the formulation process, and factors contributing to decision-making with herbal formulation. Participants were asked to clarify, explain, or expand their
answers. Phase I questions included questions like: I am interested in how herbal practitioners fit herbal medicines to patients with chronic disease. What can you tell me about this? While this may represent a typical phase I question, phase I questions were also participant directed (see Appendix H for complete interview guide). Once the first set of interviews were transcribed and coded, preliminary concepts and categories were identified and sequenced prior to continuing the interview process.

**Phase II interviews.** The next stage of data collection was more focused. Structured interviews with questions that were determined ahead of time by the concepts and propositions identified from the first phase data were conducted. Data were collected in blocks of 2-4 interviews with a total of 10 participants in phase II. The data from each block of 2-4 interviews were analyzed followed by an evaluation of the questioning process with a reformulation of questions. This process adapted and modified the interview questions to specific information needed or deficits in the emerging theory.

Phase II interviews contributed to the meaning and depth of the derived concepts and propositions. This second phase was aimed at the emerging theory description of the BSPP of formulating herbal medicines to individuals with chronic disease. Questions addressed practice patterns and beliefs confirming, defining, and expanding the concepts and relationships revealed during the first phase interviews. Specific and focused questions, while unable to be totally anticipated, included questions like: What characteristics of the person are important in determining the fit with herbal medicines and what contributes to your selection of specific herbs used in formulations? How do you determine constitutional patterns? How is a tissue state different from a symptom? Responses to the questions led to additional focused questions, such
as, what steps do you go through or what are the factors that impact this and can you explain that?

Data from the second phase of interviews were transcribed, coded, and analyzed to shape the emerging theory and to identify subsequent questions. This loaded or added depth and quality to the grounded theory on the BSPP of formulating herbal medicines to individuals. Data collection was driven by and revolved around the categories and concepts identified, which provided them with meaning and context and, in turn, directed additional data collection. The constant comparative process or iterative cycling between data collection and data analysis, and incident to incident, continued with more specific and focused questions transitioning into phase III.

**Phase III and IV interviews.** Three new participants were interviewed in phase III. Phase III interviews were used to further contextualize, refine, and confirm the emerging theory. This phase was specifically directed at capturing the complete and final theoretical BSPP of herbal formulation in chronic disease. Phase III questions included questions like: In your experience does this characterize how you personalize herbal medicine? Is this how it is done?

A final phase (phase IV) of interviews served as final confirmation of the constructed grounded theory. Phase IV consisted of 22 additional interviews with participants. The concepts, definitions, characteristics, and propositions or relationships of the theory were confirmed and verified with final interviews (Corbin & Strauss, 2008). Incongruence or dissonance was clarified within the context of the last interviews and the theory was modified, expanded and remodeled as appropriate from data. Participants were asked to respond to the grounded theory with questions like: Does this represent how you formulate herbal medicines for patients with chronic disease?
Constant comparison with data analysis and data collection or movement between data and category continued until saturation or robustness of the concepts was obtained (Charmaz, 2010). Saturation, referring to concept loading, denotes full concept development and represented completion of data collection. Grounded theory concepts, propositions, contexts, contingencies, and consequences display exploration into both depth and variation (Corbin & Strauss, 2008).

Data Collection Procedure

Following recruitment and the herbalists’ responses to the investigator, data collection procedure followed the following steps.

1. Initial contact was by email or phone. With this contact, convenience was verified (see Appendix E for script).
   - Introduced self and verbally explained the study including purpose, advantages, expected outcomes, and the disadvantage of participation.
   - Disadvantages were described to potential participants as the expected time commitment for participation in the interview and follow-up interviews.
   - Advantages were described to volunteers as the opportunity to participate in a novel study and exploration of how herbalists formulate herbal medicines for persons with chronic disease and as a benefit of expanding knowledge of WHM within the scientific community.
   - Informal screening questions for eligibility were asked (see Appendix F).
   - If eligible, verbal consent for participation was obtained by phone or expressed by email. With consent, the volunteers were then emailed the University of Arizona’s Institutional Review Board’s stamped disclosure statement for humans subjects
protection (see Appendix I) with the full description of advantages and potential disadvantages for participation. Potential disadvantages included that there were no known physical or psychological risks greater than that occurring through the course of daily activities and no costs would be incurred for participation. Participants were notified that they may terminate the interview at any time.

- *Skype* or phone interviews with a mutually agreed upon time were arranged.

2. Interviews

- Phase I and II – approximately 1 to 2 hours.

- Demographic data (see Appendix G) were obtained at the time of the interview by the interviewer.

- Interviewer asked open or focused information-seeking questions (see Appendix H for interview guide) with probing and information-seeking modifiers as needed, depending on the phase of data collection. Additional interview time was arranged in two cases for interview completion. All interviews were voice recorded.

- Phase I interviews started with: “Can you tell me about what it is like when you formulate herbal medicines for clients?”

- Phase II interviews started with getting an overview of how that person formulated, then informing the person of what is currently known related to fitting whole plants to patients, and then stating, “what I now need to find out is…so, can you….”

- Interviews were concluded with a summary, necessary clarifications, and follow-up arrangements.
• Interview notes and post-interview reflections by the investigator were separate from the transcribed interviews.

• Phase III and IV follow-up interviews were approximately 15-45 minutes and conducted by telephone, pre-arranged Skype, and by email interaction.

• At the conclusion of phase IV, relevant educational materials were reviewed for theory congruence and concept checking. The aims of this study and the emerging theory guided the use of educational materials as a reference for congruency, diversity, or incongruence of the theory categories and concepts. The purpose was to integrate the final process with existing educational materials. It was anticipated that educational materials would not be rich with depth, description, and diversity of categories and concepts of the emerging theory. The intent of integrating with educational materials was to verify that the emerging theory is minimally consistent with expert teachings and opinions and contributes to the body of knowledge within the field of herbal medicine.

Data Management

Data were collected in blocks of 2-4 interviews prior to analysis for the purpose of organization and data management. All participant interviews were voice-recorded with handwritten interview notes. Each interview was reviewed for content and numerically coded and dated following the interview. Following the interview, recorded interviews were transcribed into a Microsoft-Word file (MS-Word). They were numerically coded in a document, including interview number differentiating each interview, and entered into Atlas ti 7. A University of Arizona contracted medical transcriptionist with CITI training was employed to transcribe the
interviews. Completed interview transcriptions were proofread with the recorded interviews to check for accuracy. Errors were corrected.

Interview notes made during and following the interviews became data for analysis and were transcribed and kept as MS-Word documents for reference in the development of the grounded theory. Elicited emails from participants in Phase III and IV of data collection were considered data and transcribed into MS-Word files. Tables and summaries resulting from analysis of educational materials were kept as MS-Word files.

**Data Analysis**

Congruent with Grounded Theory, data analysis began immediately and proceeded using the constant comparison method. Constant comparison is the iterative process of data collection with data analysis and data to data comparison and ongoing comparison of data to the developing theory. Incidents were compared to incidents, evaluating similarities and differences, providing categories with definition, description or properties, and differentiation (Corbin & Strauss, 2008). Data were coded using open, axial, and selective coding.

**Coding**

All data were coded for categories and concepts with *Atlas ti 7*, a computer program for qualitative research. The visual depiction of emerging categories and relationships assisted with category reduction, ordering, and grouping. The main categories and subcategories or domains and concepts were tabled and diagramed multiple times in multiple configurations for visualization so that relationships could be explored and the emerging grounded theory could be visualized. The tables and diagrams allowed for the exploration of categories and relationships and contributed to the final structure of the process.
**Phase I Analysis**

Analysis began following completion of the first phase of interviews (Bell, Koithan, DeToro, & Ronan, 2005) prior to additional data collection. Data from phase I of the interviews were broken into meaningful units and coded, creating descriptive categories as initial representations of the process of tailoring herbal medicines to the individual (Corbin & Strauss, 2008). Emic coding was used (121 codes derived from the participants’ words) to open code for concept and categories identified with properties and dimensions with the first interview. The following interviews in Phase I were coded using etic coding. Coding was done for relevant sequencing, patterns, interactions, connections, and process as well as context and concept depth, variability, and definition (Charmaz, 2010). Following the fourth interview, codes were organized according to time sequence, through ongoing evaluation (constant comparison), resulting in the formation of an initial emerging process. While accounting for all the data, the beginning sequencing consisted of categories and concepts and followed initial data reduction (abstraction), where codes were merged and combined into 4 main categories based on similarities across patterns moving from emic to etic (theoretically-derived codes). Axial coding began along with open coding towards the conclusion of the coding of the first phase with the emergence of 13 subcategories. Memos (thoughts pertaining to methods, interpretations, and theoretical considerations) were captured in separate MS-Word files or with *Atlas ti 7* simultaneous with the coding process to record theoretical ideas, questions pertaining to the data being coded, and insights into the emerging theory.

**Phase II Analysis**

Data were analyzed following the data collection of every two to four interviews.
Axial coding continued in phase II along with open coding. Axial coding was used to name or represent meaningful categories, concepts, and subcategories with definitions and identified relationships (Charmaz, 2010). With axial coding, categories that were collapsed or split were redefined, reordered, and reconstructed with new connections. Concepts at this point were linked and extended, refined, and integrated. Subcategories were identified and the level of abstraction and centrality of concepts was determined (Charmaz, 2010; Koithan, 2009).

Interviews 5-8 were coded using codes for the categories that were identified in the first phase of analysis with further identification of subcategories. Interviews 9-15 were coded using codes for the categories and subcategories identified. Analysis focused on enhancing properties, dimensions, and depth of categories and subcategories with constant comparison of data units. Constant comparison determined areas of missing data and so directed the next set of interviews as well as the questions to be asked. Data analysis continued in a spiral or back and forth movement following data collection with additional analysis directing further data collection. This was to obtain relevant data that added to the categories until no further depth or variation was forthcoming. As analysis continued, the categories were tabled and diagramed for visualization enhancing concept stratification, contexts, conditions, propositional relationships, and consequences.

**Phase III and IV Analysis**

Phase III and IV continued with axial coding, eventually becoming selective coding in phase IV. A process matrix was constructed in phase III data analysis to compare the sequence across time using the data from each participant. Second order matrices were constructed to explore the process for the participants using constitutional energetics and non-constitutional
energetics and educational backgrounds in herbal medicine. Even though no distinct differences emerged from this data exploration, it did contribute to greater dimension and property depth.

Selective Coding followed the specific and focused questioning in phase IV data collection process, continued for several months, and refined the coding process by naming or selecting a core process or central theme that connects and relates to all steps of the process and subprocess. Likewise, a core process was named for the subprocess that connects and relates to the main process. This is the most abstract of all categories and represents the primary process or theme of the study (Charmaz, 2010). Axial coding followed by selective coding and constant comparison provided the final abstractions and overall theory congruence. Data were collected and analyzed moving forward in interpretation until it concluded with the construction of a theory of the process of personal herbal medicine formulation to individuals with chronic disease along with the core concept. Educational materials were integrated during phase IV analysis. Table 3 provides a summary of the progression and iterative nature of recruitment, data collection and data analysis.
### TABLE 2. Recruitment, Data Collection, and Data Analysis

<table>
<thead>
<tr>
<th>Recruitment</th>
<th>Data Collection</th>
<th>Data Analysis</th>
</tr>
</thead>
</table>
| • Herbalhall recruitment notification posted  
• Noted or key herbalists contacted for referrals | PHASE I: Open interviews 1-4 | PHASE I:  
Open coding moving to Axial  
• Emic coding first 1  
• Etic coding 2-4 |
| | RESULTS:  
• Codes tabled in descriptive categories using all the codes. Subcategories developing. Constant comparison of data pieces for similarities and differences.  
• Sequenced by time.  
• Focused questions for next phase of interviews. |  
| | PHASE II: Structured and focused interviews 5-8 | Analysis conducted in blocks of 2-4 interviews. |
| | • Snowball recruitment from participants  
• Resubmitted Herbalhall recruitment invitation | PHASE II:  
Axial coding with open coding  
• Interviews 5-8 coded using categories, abstracting, and reducing with constant comparison. Looking at how concepts and categories relate.  
• Questions revised for next set of interviews. |
| | Focused interviews 9-12 |  
| | Focused interviews 13-15 (one person interviewed twice) | • Interviews 9-12 coded like 5-8. |
| | • Snowball recruitment from participants | • Interviews 13-15 coded using categories and subcategories/ concepts for depth resulting from specificity and detail.  
• Data reduction or code merging and re-ordering with diagrams and code tables to explore relationships, context, and consequences of categories.  
• Questions for next phase of interviews. |
| | PHASE III:  
Confirmation interviews with 3 expert herbalists | PHASE III  
Axial coding and constant comparison continued with re-ordering categories, subcategories using tables, diagrams, and matrices.  
• Questions for next phase of interviews. |
| | PHASE IV:  
Validation interviews of 12 participants for a total of 22 additional interviews | PHASE IV  
Axial coding leading to selective coding. |
| | Educational Materials Reviewed | Educational materials evaluated for process congruence and incongruence.  
Selective coding with constant comparison of data to process continued. |
Theoretical Sensitivity

Considering the principal investigator’s background and knowledge base in WHM, there was theoretical sensitivity to the research area and data obtained. The advantage is prior knowledge of the language and culture of WHM. This promoted trust with participants and minimized over-explanations and misunderstandings of terms and language usages associated with herbal medicine. As well, theoretical sensitivity informed questioning and sampling procedure (McGhee, Marland, & Atkinson, 2007). Prior knowledge of WHM allowed access to and a view into the culture of herbal medicine not readily available to persons without prior knowledge. In addition to enabling me to “speak the language” of WHM, my knowledge of the subject enriched analysis and allowed me to compare and make credible interpretations as well as challenge the results of the study (Corbin & Strauss, 1990b; Luckerhoff & Guillemette, 2011). Theoretical sensitivity with this study was balanced with openness and did not impede discovery (Glaser, 2002; Munhall, 2007). Preexisting or received concepts or theories were not used in this research. The dissertation chairperson served as a check to assure that previously held theories, assumptions, and beliefs did not interfere with the grounded theory development process.

Reflexivity in the form of journaling, reflective writing, and peer debriefing by the dissertation chair was used to protect against the overuse of previous knowledge (McGhee et al., 2007). Consistent with symbolic interactionism, meanings emerge, evolve, morph, change, and are transformed from interpreting interactions between persons (Annells, 1997; Corbin & Strauss, 2008). Therefore, it was beneficial to use prior knowledge and experience to explore new avenues, explanations, and added dimensions (Corbin & Strauss, 2008). The situation where I was not able to be open and engage in new knowledge did not present itself. It was not
necessary to bracket or suspend prior knowledge to enable openness (Creswell, 2009; Munhall, 2007).

**Protection of Human Subjects**

The University of Arizona’s Institutional Review Board Protection of Human Subjects approved this study on June 6, 2012 (see Appendix J). The ethical principles of respect for persons, beneficence, and justice guiding this research supported the protection of human subjects. Furthermore, full disclosure to participants and accountability to the institutional review boards of the University of Arizona acted to promote and support the ethical treatment and protection of participants in this study. The procedures of this study were implemented in consideration of the benefits of participation and minimization of exposure to risks of participation (Broenstein, n.d.). The research procedures of this study were implemented with fair distribution of benefits and burdens (Broenstein, n.d.). Inclusion criterion for this study reflected the inclusion of practitioners with specific herbal knowledge and practice. No person was excluded relative to race, gender, gender preference, or religious affiliation. No data or notes were changed or eliminated from this study for any reason. Each person was approached and treated with respect and consideration for their human dignity, self-determination, and autonomy (Broenstein, n.d.). This was evidenced in the implied consent to participant and the acceptance of decisions participants made regarding their role in this study and what information they chose to provide.

**Potential Risks**

Potential risk to participants was minimal and efforts were made to protect participants from any potential or unforeseen risk. No known physical risks or costs were anticipated or incurred for participants and no significant psychological risks greater than that occurring
through the course of daily activities existed. None of the participants reported experiencing stress or anxiety while discussing herbal formulation activities. One interview was shortened due to the researcher perceiving increased suspicion from the participant related to the study. One participant was not reinterviewed due to perceived hostility to the research process. No interview process was terminated.

Benefits

While there were no specific or direct benefits, participation in the construction of knowledge of herbal medicine was considered a benefit to participating.

Disclosure

All participants were of legal age and competent. Participants, by their own volition, agreed to participate in this study. Consent was implied and freely given following the receipt of a written disclosure of the study and before the interview. The disclosure included an explanation of the study, participant responsibilities, anticipated time commitment, advantages and disadvantages, and the fact that the interview would be audio-recorded and transcribed. Participants were advised that participation was voluntary and they reserved the right to refuse to answer any question or could stop or withdraw from the study at any point. Participants were informed in the disclosure statement and at the time of the interview that the interview would be audio-recorded. Any questions the participants had were answered.

The disclosure statement was pre-approved and stamped by the University Institutional Review Board (see Appendix I). Participants received a stamped copy of the disclosure statement. Consent to participate was freely given and participants could discontinue participation at any point. No participants discontinued participation. Participation was not elicited based on any service the researcher provided.
Confidentiality and Privacy

Procedures were implemented for protection of confidentiality and privacy. All interviews were private with only the investigator and participant present. All contact information was confidential and files linked to the participant were de-identified and kept in the private password protected computer of the investigator. The codebook with participants’ names, practice information, and contact information was locked in a cabinet accessible only to the investigator. All contact information and audio recordings were destroyed following completion of analysis. The computer housing the data is private with access only to the researcher and without potential for public or other private access. All transcribed interview documents were downloaded to Atlas ti 7 and password protected. The original MS-Word docx transcripts were password protected on a private computer. Only de-identified data were stored in a password protected private computer. No printed transcriptions exist. The transcriber was instructed to use “participant” instead of the name of the participant. No data revealing identities were included in transcripts.

Rigor and Trustworthiness

Rigor in this study was assured by adherence to the Strauss and Corbin (2008) Grounded Theory method with prolonged engagement with participants and triangulation in data sources (interviews, notes, and educational materials). In addition, investigator reflexivity, peer debriefing, and the use of thick description in a well-written document provided rigor in the grounded theory. Transparency of the research procedure from initiation to outcomes as evidenced by research logs and audit trails gave further confidence of a rigorous method. The investigator kept a research log and the research committee chairperson in this study was available to conduct audit trails.
There are no simple or single set criteria for which to judge the rigor of qualitative study methods (Rolfe, 2006). Each method and study has the responsibility to demonstrate truth and rigor and this is largely determined by how it is written up and presented (Rolfe, 2006). While quantitative research is judged by objectivity, reliability, and validity, qualitative research holds to different criteria to demonstrate and convince the reader that the research has been rigorously applied and the results can be trusted. Considering the inherent differences in research designs and methods, it can be considered a misapplication to say qualitative research should be reliable, valid, and objective.

Criteria for evaluation of qualitative research for trustworthiness and rigor are truth-value or believability, applicability, dependability, and confirmability (Lincoln & Guba, 1985). Together, these criteria verify trustworthiness and ensure rigor in qualitative research as scientific evidence (Rolfe, 2006). Trustworthiness and rigor are ultimately linked to transparency of the research process. The research process implemented in this study was transparent as evidenced by auditability. The criteria assuring credibility, applicability, dependability, and confirmability are visible reportable practices (Rolfe, 2006).

Lincoln and Guba’s (1985) criteria for trustworthiness can be applied to GT research in an effort to communicate value and truth of the study to the consumer. Rigor and trustworthiness are considered the qualitative researchers’ tools that serve to prove, give evidence of, or demonstrate that the results can be trusted.

Credibility is truth-value or trustworthiness (Rolfe, 2006) and can be considered comparable to the criteria of internal validity used in quantitative research (Lincoln & Guba, 1985). The likelihood of a qualitative study being credible or believable where the findings are true is increased with prolonged engagement with the participants or subject matter and staying
true to the method. While prolonged engagement was evident in this study, it increased trust with the participants and refined the contextual background of the study and so reduced distortion. Chiovitti and Piran (2003) recommend using the participants’ actual words to enhance credibility. This study reports the findings using salient exemplars with the participants’ own words when appropriate.

Credibility was further assured by data coding checks by the research committee chairperson. Periods of weekly meetings facilitated code and category development during all the phases of data collection and analysis. Initially, the meetings assured that all the data was represented in the category coding. Then, regular meetings during analysis acted to further assure that coding and theory development was consistent with the transcripts and categories. This team approach promoted credibility and rigor in the grounded theory study.

Triangulation refers to using more than one source of data collection, more than one method, and/or more than one investigator. When triangulation is used in a qualitative study, the study becomes more credible to the reader. Triangulation adds complementation, completeness, and confirmation to the study (Risjord, Dunbar, & Moloney, 2002). This study elicited data from participant interviews with interview notes of observations and reflections, and written documentation from the field of herbal medicine education, including materials from schools of herbal medicine and national conferences.

In addition to the criteria of truth-value, Lincoln and Guba (1985) also state that peer debriefing or having external checks incorporated into the inquiry process, rechecking final findings against the raw data, and having participants or members check to verify final findings, all support the credibility of the findings. Interviews were rechecked during the final stages of analysis and theory constructing with 12 members participating in a series of follow-up
interviews to verify and check the findings. Likewise, three expert practitioners were interviewed to verify the findings. Peer debriefing occurred on one occasion with the dissertation committee consultant.

Transferability or applicability of the findings replaces external validity. The concept of generalizability or external validity is relevant to quantitative research, but inconsistent with qualitative methods and the knowledge and truth claims made by qualitative research (Lincoln & Guba, 1985). In place of external validity, qualitative researchers refer to thick description as criteria for the applicability or transferability of research results. Description for the qualitative researcher involves sample specifics, including characteristics. This study includes description of theory constructs, properties, propositions, conditions, and consequences that are thick or rich where description is embedded in context and extends with new knowledge and new understandings (Corbin & Strauss, 2008). This description is essential for applicability of research findings. Transferability is further enhanced with triangulation (Risjord et al., 2002). Applicability was considered during Phase III and IV of data collection and analysis with consultation of the research committee members who have constructed grounded theory in whole systems of medicine, thereby promoting the development of a complete, dynamic, and functional grounded theory. Applicability was further enhanced with expert checks from within the field of herbal medicine.

Dependability as a criterion for trustworthiness is a precondition of credibility. If the qualitative research is dependable (reliable), then it is credible (valid) (Lincoln & Guba, 1985). To further assure dependability or consistency of findings, audit trails of methods, process, and data are performed with qualitative studies. This study is fully auditable due to the use of Atlas ti 7 and interview logs. Dependability is frequently described as a substitute in qualitative research
for reliability as used in quantitative research (Lincoln & Guba, 1985). Reliability refers to the degree or extent that what is measured is intended to be measured and depends on consistency (Kazdin, 2003). Dependability relies on transparency where the conclusions and results can be clearly linked to the data and research processes. Dependability and transparency is evident in this study with an audit trail.

The final criterion for trustworthiness is confirmability. Confirmability for the qualitative researcher replaces the concept of objectivity used in quantitative research. While audit trails of process and triangulation partially insure confirmability, submission of the GT to practitioners of WHM for verification in phase IV data collection and analysis offered another guarantee that the data is from the participants and not the researcher. Recognition of and identification with the GT by WHM practitioners in the final interviews and with dissemination of this information acts as study confirmation.

It is through measures enhancing credibility, transferability, dependability, and confirmability that this research can be judged as rigorous and trustworthy. Transparency of these research activities constitutes evidence of rigor and trustworthiness in the research process and with the results.

**Summary**

Grounded Theory is an appropriate method to explore the BSPP of formulating herbal medicines to the individual. Truth is subjective, dynamic, and is constructed with interpretations (Corbin & Strauss, 2008). While rooted in symbolic interactionism, pragmatism, and constructivism, grounded theory is consistent with theories of whole systems. GT, as a tool, is consistent with CAS, NLDS, and social network theories as expressed in humans with dynamic patterns interconnected and interacting with their environments (Koithan et al., 2012). GT
represents one way of constructing meaningful reality and knowledge that is contingent on or emerges from the social-interactive process (Crotty, 1998). While GT is a research method grounded in the real experiential world, it is a method to study emerging complexity of whole interacting systems.

This study applied the systematic GT method of Corbin and Strauss, including the use of axial coding, to develop theory. Data were collected from informant interviews and research interview notes with integration with WHM educational materials. Data were analyzed using the constant comparison method (Corbin & Strauss, 2008). The final product of this qualitative research is an interpretive explanation of the BSPP herbal practitioners use to formulate herbal medicines to the individual with chronic disease. It is a constructed theory expressing a process with sequential steps, relationships between the steps, and core concepts that are grounded in and contextualized by the experiences of herbal practitioners. Through the process of abstraction, central concepts contextualized by conditions, contingencies, and consequences were defined, described, and supported with participants’ words and meanings. A substantive grounded theory has been developed on the BSPP process of personalizing herbal medicines to persons with chronic disease. This study has met the demands of rigor and trustworthiness for qualitative research. The following chapters will address the completed study results, implications, and conclusions.
CHAPTER FOUR: FINDINGS

Introduction

The aim of this study was to develop a grounded theory of the basic social psychological process (BSPP) that WHM practitioners use when formulating herbal medicine for individuals with chronic disease. Interviews were conducted to procure the perceptions, understandings, and experiential reports of WHM practitioners. A grounded theory, *Personalizing Western Herbal Medicine: Weaving a Tapestry of Right Relationships*, was developed from the reported experiences of the study participants. *Weaving a Tapestry of Right Relationships* is the core concept and phenomena explained by the process of *Personalizing Western Herbal Medicine* (PWHM). The theory is contextualized with practitioner and client beliefs, assumptions, knowledge, experiences, expectations, and attitudes. The basic process includes the steps of PWHM, which encompasses the decision-making subprocess of *Tailoring Herbal Medicines*. *Tailoring Herbal Medicine* consists of specific sequential functions or steps with strategies and tools that lead to personally-designed herbal medicine resulting in immediate, intermediate, and long-term outcomes. *Creating Concordance* is the theme of this subprocess. This chapter will provide participant profiles and the study findings. The grounded theory, *Personalizing Western Herbal Medicine: Weaving a Tapestry of Right Relationships*, will be summarized. In addition, the subprocess *Tailoring Herbal Medicine: Creating Concordance* will be summarized. A model of the theory will be presented and the pathways through the model will be explained. The theory will be explained in detail with salient quotes from the participants.

Participants

Data for this study were collected from 17 herbal practitioners from July through October 2012. Participants were practitioners of Western herbal medicine in the US, had a minimum of
five years’ experience in herbal medicine, and practiced formulation of herbal medicines, utilizing crude plant material for patients with chronic disease. Three participants, interviewed after the data were analyzed, were considered experts in the field of herbal medicine. These interviews were considered as a point of reference for verification purposes. Pseudonyms are used for each participant.

**Participant Profiles**

**Interview 1.** Flora is a registered nurse practicing herbal medicine. She introduced herself as a clinical and professional herbalist registered with the AHG practicing Western herbalism for over 20 years. She practices as a solo practitioner and consults with 15-20 clients per week and manages an herb shop. Flora formulates 100% of her recommended herbal medicines as tinctures, teas, glycerites, and topical preparations.

**Interview 2.** Herb has practiced what he calls eclectic herbal medicine for 32 years and writes 15-20 prescriptions per week for clients. Herb has a PhD in transformative studies, formal education in Western herbal medicine, and formal and family lineage education in Traditional Chinese Medicine. Currently, he is in a solo clinical practice, teaches, and administers in academic medicine. He formulates approximately 70% of his herbal medicines and uses bulk or desiccated herbal preparations.

**Interview 3.** Rose considers herself a clinical-energetic herbalist who practices herbal medicine full-time. She holds a Bachelor of Science degree in social work and completed a seven-year apprentice program in herbal medicine. She adapted her system of energetics from the Native Americans from whom she initially learned herbal medicine. She consults 6-8 clients per week as an independent practitioner along with medicine making, gardening, teaching classes
in herbal medicine, and broadcasting on a monthly herbal medicine radio show. She has been practicing herbal medicine for 14 years and formulates 100% of the medicines she recommends.

**Interview 4.** Cal Amus is a master’s student in herbal medicine. He practices Western herbal medicine with a heavy emphasis on nutrition. His herbal medicine practice is full-time and split between an integrative wellness clinic and a private independent practice. Cal has practiced herbal medicine for approximately seven years and formulates approximately 97% of the medicines he recommends, primarily as tinctures.

**Interview 5.** Marsha Mellow holds a bachelor’s degree in chemistry, certification as a mid-level provider, and has informal education in herbal medicine. Her education in herbal medicine includes conferences and non-degree certification courses with renowned herbalists. She has practiced Western herbal medicine for 20-22 years and currently practices full-time. In addition to consulting with approximately 15-20 clients per week, she teaches herbal medicine at her school of herbal medicine located at her home. Marsha formulates all the medicines she recommends.

**Interview 6.** Cammie Mile is a family nurse practitioner and practices Western herbal medicine in a private practice shared with a medical physician who also practices as a homeopathic practitioner. Cammie has practiced herbal medicine for approximately 14 years and currently sees about 20 patients per month. She obtained her herbal education informally through certification course work with expert herbalists and regular conference attendance. While writing formulation prescriptions for approximately 70% of her patients, she also recommends premixed whole plant products on some occasions.

**Interview 7.** Ginny Seng has a bachelor’s degree in communication and currently practices Western herbalism in an independent practice. She is a registered herbalist with the
American Herbalists Guild (AHG) and received her herbal education at the California School of Herbal Studies followed by seven years apprentice training. Currently, she consults 10-12 clients per week and teaches herbalism and field botany. Ginny’s work in herbal medicine is full-time. Formulation is described as the core of her practice and approximately 95% of her medicines are personally formulated.

**Interview 8.** Ashwa Gandha attended Michael Moore’s herbal medicine certification program and had several years of apprentice training in herbal medicine. He works full-time as a clinical herbalist, consulting with clients, teaching herbal medicine, and wild crafting. He sees up to five clients per week in consultation and compounds herbal formulation prescriptions for local herbalists. He compounds 100% of the medicine formulations he recommends.

**Interview 9.** Pepper Mentha is a registered nurse practicing herbal medicine and surgical nursing. She introduced herself as a ‘simpler’, but reported in the screening process that she did formulate. She referred to herself as a simpler because she practiced herbal medicine as a hobbyist without having an office where she can see patients. She treats primarily family, friends, and coworkers. Pepper has been practicing herbal medicine for over 10 years and treats chronic diseases like skin and respiratory disorders, formulating all but one herbal medicine that she recommends.

**Interview 10.** Melissa practices as a medical herbalist full-time averaging 15 client consults per week. She has an independent solo practice. She studied in apprentice programs with several well-known herbalists and has practiced for over 13 years. Melissa formulates 95% of the herbal medicines she recommends and supplements her herbal medicine practice by contracting as a software consultant.
Interview 11 and 13. Willow, preferring to be called Sal, holds a PhD in environmental science. She practices full-time as a medical herbalist and studied Western herbal medicine in apprentice programs. She has a solo practice in an office at her home. She offers herbal medicine consultations and gardening opportunities to her clients and sees an average of 9 clients per week. She formulates 100% of the medicines she recommends. Sal was interviewed twice in phase II of the data collection.

Interview 12. Tilia described herself as an autodidactic herbalist having never completed any formal degree program. She practices full-time what she refers to as integrated American herbalism. She attends major herbal medicine conferences annually, grew up with herbal medicine practiced in her family, and formulates 100% of the medicines she recommends for her clients. She also makes tinctures and extracts for practitioner purchase and formulates for other practitioners. Likewise, she formulates standardized products for the public. Tilia consults 2-15 clients per week and has been practicing herbal medicine to some degree for 40 years.

Interview 14. Filip Endula practices clinical herbalism full-time and is a mentor to herbal medicine and pharmacy students. She holds three bachelor degrees in linguistics, foreign languages, and theology. She grew up in Germany and started practicing herbal medicine 15 years ago in the US. Her herbal medicine practice is private and shared with one other herbal practitioner. Filip studied herbal medicine in apprentice programs and currently formulates 100% of the herbal medicines she recommends.

Interview 15. Ellie Campane has been practicing as a clinical herbalist full-time for eight years. She holds a Bachelor of Science degree in herbal medicine and has completed additional herbal education in apprentice programs in Western herbal medicine as well as TCM. Ellie consults with approximately 4-6 patients per week and teaches herbal medicine students. She
practices with three other practitioners and formulates approximately 99% of the medicines she recommends.

**Interview 16.** Saint John has studied Ayurvedic, Chinese, and traditional Western herbalism. He completed undergraduate studies in pre-medicine and psychology and developed and directed a clinical herbalism program with a sliding-scale public clinic for the past eight years. St. John has authored seven books on herbal medicine and edits a journal of herbal medicine. Along with teaching, as a medical herbalist he consults 150-200 clients per year. He has practiced herbal medicine for 40 years and formulates 100% of the medicines he prescribes.

**Interview 17.** Lilly’s herbal practice represents expertise that has accumulated from traditional apprentice-based and experiential learning. She is from a family of herbal practitioners. Lilly has a Master of Science degree in health studies, considers herself a folk herbalist, and has practiced herbal medicine for 39 years. She consults 4-5 clients per day in a rural setting. This is reduced from the 10 patients per day she was seeing when practicing in an urban setting. She formulates approximately half of the herbal medicine she uses with patients, primarily as decoctions and capsules.

**Interview 18.** Sage has a master’s degree in infectious diseases and currently directs, teaches, and practices herbal medicine in a master’s degree herbal medicine program with an associated urban clinic. Her job titles include clinical supervisor and associate professor, but she calls herself a clinical herbalist. Sage has developed educational curriculum for herbal medicine and teaches all aspects of formulation. She has been traditionally educated by well-known herbalists over the last 15 years and currently formulates all of the herbal medicines she uses with the exception of two whole plant products.
Summary of Participant Demographics

Seventeen participants were interviewed for this study, representing herbal practitioners throughout the United States. Participants were from Alabama, California, Colorado, Georgia, Massachusetts, New Mexico, Oregon, Pennsylvania, Texas, Virginia, and Vermont. They were four male and 13 female practitioners ranging from 29 to 64 years old. The mean age of participants was 50 years of age.

Educational backgrounds included one high school graduate, two PhDs, three participants having master’s degrees, six bachelor’s degrees, and five with some college. Four participants had education in conventional health care. Two participants were registered nurses, one was a nurse practitioner, and one a physician’s assistant. One participant was a Doctor of Traditional Chinese Medicine. Education in herbal medicine was diverse and ranged from formal degree programs to informal instruction with eminent or well-known herbalists. Eight participants learned herbalism in apprenticeship programs.

Experience in herbal medicine ranged from 7 to 40 years with a mean of 20.5 years of experience in herbal medicine. The participants had a mean of 12.7 client encounters per week, ranging from two to 30 clients per week. They practiced full-time (n=13) and part-time (n=5) in clinical practices (n=17), as educators (n=9), and as compounders and shop owners (n= 3). Except for one herbalist, all reported receiving referrals from other health care providers. Five participants had additional full or part-time employment separate from herbal medicine. Clinical practice settings were a mix of urban and rural and herbalists worked as solo practitioners in herbal medicine practices (n=11) and with other practitioners (n=8), with one person having both a solo practice and a practice in an integrative medical setting. The most frequent title used was ‘clinical herbalist’ (n=6), while four participants called themselves ‘medical herbalist’. Seven
participants used AHG in their title as designation of registered herbalists with the American Herbalist Guild. Representing significant experience and expertise in personalized medicine formulation, 17 practitioners formulated a mean of 93% of the medicines they recommended. For a summary of participant demographics see Appendix K.

Overall, the educational background and herbal medicine education of the participants is diverse and typical of herbal practitioners. The geographic area of practice is broad and the clinical practice settings unique. This group of participants is most likely representative of herbal practitioners in the US who formulate personalized herbal medicines. The expertise and experiences with herbal medicines (93% of recommended herbal medicines are personally formulated) reflect the state of practice with practitioners who formulate herbal medicines. This expertise and experience lends credibility to this grounded theory.

**Summary of the Grounded Theory**

The basic social psychological process (BSPP) identified in this study is the process of PWHM. Herbal practitioners personalize herbal medicine by weaving a tapestry of right relationships. *Weaving a Tapestry of Right Relationships* is the phenomenon studied and is the main theme or core category of PWHM. PWHM is comprised of five steps that explain weaving a tapestry of right relationships. The steps include, *Exploring the Personal Composition, Interpreting Dissonance in the Personal Composition, Tailoring Herbal Medicine, Facilitating Success with Complementary Actions, and Evaluating Outcomes*. Embedded in this process is a five step subprocess of *Tailoring Herbal Medicine*. *Creating Concordance* is defined as creating the right relationship between the herbal medicine and the person and is the central concern or core category of WHM practitioners when tailoring personalized herbal medicine. *Creating*
Concordance is embedded in *Weaving a Tapestry of Right Relationships* and together they explain how *Tailoring Herbal Medicine* occurs.

Right relationship in whole systems refers to the pattern of organization at multiple levels that “supports, encourages, allows, or generates actualization…” or self-organization (Quinn, 1997, pp. 2-3; 2000, 2013). Right relationship is the process of interaction between parts or elements of whole systems at one or more levels. With interaction between the parts, coherent order emerges in whole systems. Right relationship describes the parts in reference to the whole. Healing is the “emergence of right relationship at one or more levels of the bodymindspirit system” (Quinn, 2013, p. 107). Wholeness or harmony in whole systems is a dynamic process of right relationship (Quinn, 1989) and refers to patterns of relationships as unity, integrity, and congruence (Quinn, 2013).

Right relationship describes interactions of embedded structures and occurs at multiple levels within the person and extends out from the person across all levels of existence. The genetic and biochemical are embedded in the cellular, which is embedded in tissues and organs, which are embedded in systems of the organism, all contextualized by local and global environments in right relationship. Bidirectional information exchanges exist in embedded structures with interactions at multiple levels. The whole organism in right relationship is located within family, spiritual, and social communities, and eco-environments, which are embedded in collective and universal environments. Ease, wholeness, and coherence or personal harmony emerges from right relationships. In therapeutic relationships with clients, herbalists design and fit herbal medicines by artfully weaving a tapestry of right relationships in the whole person experience. By using herbal medicines to nurture, tone, stimulate or relax, herbalists put “… the patient in the best condition…” to heal (Nightingale, 1859/1992, p. 75).
Weaving a Tapestry of Right Relationships is central to PWHM. Just as right relationship describes interactions at multiple levels in the human organism, right relationships describe interactions in the process of PWHM and at the level of the herbal medicine. The practitioner of herbal medicine looks for right relationships in the client, between the client and the herbal medicine, and weaves right relationships throughout the process of PWHM.

Even though a weft-faced tapestry is comprised of multiple individual interlacing threads, it presents as an integrated and interconnected whole that is tied to and supported by the unseen warp thread. Each thread of the tapestry is in right relationship creating a unified and balanced design that inspires and emanates movement and vitality. Like the weaver, the herbal practitioner is focused on creating a balanced design of right relationship. Right relationships are interlaced within and extending out from the person and are supported by the threads of the PWHM process and woven with the treads of the therapeutic relationship, client commitment, knowledge, skills, and experience with herbal medicine. Right relationship is woven through the process of PWHM. Each step of PWHM is a warp thread that provides a structure and supports the weft or right relationship of the tapestry design or the person. Ultimately, as the tapestry of right relationship is woven, the warp will disappear from sight and the tapestry as integrated patterns of organization emerges. Right relationships are woven through PWHM where each element in right relationship is essential to the whole.

The process of personalizing herbal medicine is located within the social context and structure of whole systems WHM. While this study focused on the BSPP of personalizing herbal medicines, the social structural process of WHM is beyond the scope of this study. However, there are aspects of the social structural process that impact our understanding of the basic
psychosocial process. These aspects will be treated as mediating and moderating variables to the process.

This section of chapter four will provide a description of the process of *Personalizing Western Herbal Medicine: Weaving a Tapestry of Right Relationships* followed by a definition and explanation of each step of the process. Theoretically, steps represent a sequential progression with each step dependent on the previous steps and leading to subsequent steps. Realistically, steps may be less linear in progression. In some cases, the steps may be enacted in part simultaneously or weave back and forth between steps while there is a net progression through the process.

The sequence will be explained according to the properties and dimensions of each step. Properties will be delineated as substantive or methodological. Substantive properties convey the focus of the action and methodological properties explain how the action occurs. The dimensions of each property will then be listed. All of these findings will be supported by interview data so that auditability of the findings is maintained.

**Personalizing Western Herbal Medicine**

Personalizing herbal medicine is designing herbal medicine formulations that are matched to the individual. Matching is done at the level of energetic profile, personal symptom variations, the cause of the problem, and at what contributes to the cause. It is mediated by treatment goals and the intended actions and uses of the herbal medicine. The following is a description of how the process of personalizing herbal medicine occurs.

Persons seek the assistance of an herbalist to address health concerns or chronic conditions or dis-ease. Initially, the herbalist begins to establish a therapeutic relationship with the client and gathers information to become acquainted with the client as a whole person. The
therapeutic relationship develops and builds trust, client commitment, and receptivity to
treatment with herbal medicine. In addition to this foundational work, the herbalist gathers
extensive information from the client to gain an understanding of the client’s unique personal
energetic patterns, symptom variations, and whole person health needs. In other words, the
herbalist constructs as complete and clear an impression of the client as an individual as possible,
in order that the client’s health needs may be identified, interpreted, and then treated with herbal
medicine. The purpose of this action is to give the herbalist the best opportunity to match
specific herbs to the client’s personal energetic profile, symptom variations, condition causes,
and what is supporting the causes of the problem so that the herbal medicine may best support
the person through the healing process.

When sufficient information has been gathered, the herbalist works to identify the client’s
specific health issue/dis-ease and translate the concern or issue into the language of WHM. This
includes identifying the energetic patterns of the person and the disease, how the symptoms express
and vary, the root or the primary cause of the health concern, and what feeds or supports that cause.
Traditional WHM, over many years, has developed a way of speaking that provides a descriptive and
functional system of matching herbal actions to specific characteristics of energetics, symptoms, and
causes. For example, with a skin rash, it may be determined that the liver is not cleaning the blood.
The herbalist would say that there is “stagnation” in the liver and the symptom of the rash may
represent “excess heat”. Knowing that the cause is “stagnation”, the herbalist can then select herb
categories that function to move the blood and lymph and stimulate the liver so, in essence move the
lymph and cleanse the blood. Specific herbs selected would be herbs with cooling qualities.

Following the identification of the health problem or dis-ease, the herbalist begins to
design the personal herbal medicine. Treatment goals and the necessary functions of the herbal
medicine are established. Then, the herbalist identifies herbal actions or categories of herbs that meet the necessary functions. Following this, specific herbal alternatives matching the necessary functions are identified. The alternatives are reduced to specific herbs matching the client’s symptom variations, energetic profile, cause of the problem, and the supporting mechanisms or structures. Strategies are used to select specific herbs from the alternatives that result in the personalized herbal medicine. For example, the herbal categories with actions that address relieving the symptoms of anxiety could be ‘relaxant,’ ‘sedative,’ or perhaps ‘antidepressant.’ The cause may be addressed with herbs that address the nervous system like ‘nervines,’ ‘adaptogens,’ ‘restoratives,’ ‘tonics’ or perhaps ‘alteratives.’ Now that the herbal actions are identified, the herbalist considers all of the potential herbs that have the identified actions. The herbalist may have 15 different ‘sedative’ herbs or 12 different tonic herbs available to choose from. Strategies to reduce the alternatives depend on a thorough knowledge of the person.

Formulating personalized herbal medicine matches or fits the herbs used in a medicine to the individual by addressing the health issues of the client at multiple levels. The example of a tailor is helpful to explain this unique quality of WHM practice. Human beings come in all shapes and sizes and, considering this fact, one size fits all does not necessarily provide a good fit and rarely supplies the best fit. Hence, the tailor is enlisted to adjust and customize the clothing to fit the contours of the individual person’s shape and size. WHM recognizes that humans are unique individuals with diverse physical, emotional, and spiritual compositions or make-ups. In this respect, WHM acknowledges and respects the whole person as a distinct individual and provides a personalized holistic system of medicine.

The success of the personalized herbal medicine is strengthened and supported by addressing and encouraging healthy lifestyle choices, social support, and self-determination. Moderating one’s
behavior is an important aspect of managing causes that can enhance or hinder healing and maintaining health. Social support, self-awareness, and personal empowerment are complementary to herbal medicine. A nutritious diet provides nutrients and fuels the healing process. Regular daily exercise increases circulation, builds strength and flexibility, improves attitudes, and is personally empowering. Herbalists engage in complementary actions such as education on diet, exercise, and lifestyle choices to support and empower the client and promote healing.

The WHM herbalist knows when there is a good match between the person and the herbal medicine. For example, if we consider music, we know when a musical duet is in tune or in harmony. And we know when a musical duet is out of tune. We sense it though our hearing and, often, we have a physical and emotional reaction to harmony or disharmony. Now, consider the herbalist. The herbalist listens to the healing duet, the client and the herbal medicine, and uses all sensory, perceptual, and intellectual resources to “sense” and determine whether there is harmony or dissonance. Similar to tuning a musical instrument, the herbalist may need to “tune” or adjust the herbal medicine formulation to bring the “healing duet” into harmony or concordance.

Figure 2 presents the sequence of *Personalizing Western Herbal Medicine: Weaving a Tapestry of Right Relationships* and the subprocess of *Tailoring Herbal Medicine: Creating Concordance*. 
Exploring the Personal Composition

PWHM begins with the initial client and herbalist interaction as the herbalist starts Exploring the Personal Composition of the client. Exploring the Personal Composition is gathering of information and impressions with the intention of knowing and understanding the client and the client’s unique energetic profile, symptom variations, and disease causation. Information is gathered on personal health circumstances so that a personal herbal medicine may be tailored to fit or concord with the client’s individual health needs. Exploring the Personal Composition is a time-intensive holistic assessment of the client that is conducted with different means and methods. It is ongoing, but is limited by a critical mass of information. Each additional step of the process of PWHM is predicated on the first step of Exploring the Personal Composition.
Weaving a Tapestry of Right Relationships is the theme of this step and explains Exploring the Personal Composition. In step one, the parts or elements of the whole person and how they interact in a harmonious or dissonant fashion is the focus of activity with the overall intent to increase coherence of the whole person by supporting, encouraging, and allowing right relationships at all levels of the personal experience. Likewise, the right relationship between the client and the herbal practitioner is central to PWHM. With the right relationship between the client and practitioner, the practitioner is able to attune the herbal medicine to the client.

Exploring the Personal Composition is defined by six properties: the whole person context, personal health landscape, personal energetic patterns, the therapeutic relationship, client commitment, and knowledge, experience, and the application of skills. The first three properties indicate the focus of Exploring the Personal Composition while the final three properties indicate how this occurs. Table 3 shows the first step of PWHM, Exploring the Personal Composition, along with associated properties and dimensions.
### TABLE 3. Exploring the Personal Composition

<table>
<thead>
<tr>
<th>Property</th>
<th>Dimensions</th>
</tr>
</thead>
</table>
| Substantive: The focus of *Exploring the Personal Composition* is gathering information on: | The whole person context | Socio-cultural milieu: Socio-relational, mental, emotional  
Personal resources: Sense of self (self awareness), strengths and resilience, purpose, joy, contentment, ability to change, spiritual health  
Environmental resources: Connections to plants/earth, |
| Whole person health landscape | Ground substance/contours, stress, challenges, review of systems  
Health history, history of treatment, healing strategies, history with herbal medicine  
Chronic disease: Current symptoms, modes of presentation, variations, diagnosis  
Life choices, style, experiences |
| Whole person energetic patterns | Movement, fields, organizing/integrating force  
Constitution, stable, changing, tissue states, symptoms  
Patterns: Unity or coordination of factors, energetic pattern as whole person pattern  
Differentiated from vitality |
| Methodological: *Exploring the Personal Composition* is accomplished with: | The therapeutic relationship | Partnering with the client, partnering with plants  
Client-centered approach  
Interactive  
Trust building and nurturing  
Time involved  
Practitioner commitment  
Practitioner roles- educator, mentor, resource, witness, guide, storyteller, collaborator  
Practitioner characteristics- nonjudgmental, patience, honest, flexible, compassionate |
| Client commitment | Autonomy  
Participation |
| Practitioner knowledge, experience, and application of skills | Assessment: Inquiry (interview, questionnaire), Observation, Examination: inspection, palpation, auscultation, tongue, and pulse  
Communication  
Different patterns of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential, traditional  
Critical thinking-problem-solving, assimilating and synthesizing information, evaluating, sorting, differentiating, and prioritizing |

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**Interpreting Dissonance in the Personal Composition**

When the client’s personal composition has been sufficiently explored, providing an understanding or knowledge of the client, the herbalist begins the next step of PWHM by *Interpreting Dissonance in the Personal Composition*. Interpreting Dissonance in the Personal Composition is defining what is unstable or out of harmony. Dissonance or discordance is active
tension often associated with irritation, unpleasantness, pain, grief, or conflict (Kamien, 2008). Furthermore, dissonance is in opposition to consonance or harmony. With dissonance, there is tension that generates movement toward resolution or right relationships. Interpreting dissonance within the person is identifying and defining the disharmony that guides the tailoring of the herbal medicine. Following Exploring the Personal Composition, Interpreting Dissonance in the Personal Composition is the next sequential step in PWHM. Interpreting Dissonance in the Personal Composition is conditioned on Exploring the Personal Composition and causal for Tailoring Herbal Medicines.

Weaving a Tapestry of Right Relationships is the theme of Interpreting the Dissonance in the Personal Composition. Dissonance and disharmony reflects a lack of unity or connection within the patterns of relationships and generates movement towards right relationship between the herbal medicine and the person for resolution of the dissonance.

Interpreting Dissonance in the Personal Composition includes sorting as differentiating and prioritizing client-related information and converting that information into holistic and energetic terms and concepts conducive to herbal medicines. Interpretation integrates symptom variations, mechanisms of occurrence, and supporting mechanisms together with client and disease energetic patterns. This step of interpretation facilitates the development of a theory of causation that ultimately names what is occurring with the client or what the concern is. The name assigned is understandable to the herbalists and makes the dissonance identifiable for herbal medicine treatment.

Interpreting Dissonance in the Personal Composition is defined by five properties. The first two properties indicate the focus of Interpreting Dissonance in the Personal Composition and the last three indicate how Interpreting Dissonance in the Personal Composition occurs.
Table 4 presents the properties and dimensions of *Interpreting Dissonance in the Personal Composition*.

**TABLE 4. Interpreting Dissonance in the Personal Composition**

<table>
<thead>
<tr>
<th>Property</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substantive: The focus of Interpreting Dissonance in the Personal Composition is:</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Identifying dissonance | • Patterns of dissonance: energetic profile (tissue states), symptom variations, modes of presentation  
• Root and ground contours-supporting structures  
• Theory of causation: physiology, psycho-emotional-spiritual modes of activity, energetics/constitution |
| Naming the root | • Naming: Blockage, constriction, depletion, sluggishness, relaxation, stagnation, or excess and loss of connection.  
• Amenable to treatment |
| **Methodological: Interpreting Dissonance in the Personal Composition is accomplished with:** | |
| The therapeutic relationship | • Partnering with the client  
• Client-centered approach, purposeful  
• Interactive  
• Trust building and nurturing  
• Time involved  
• Practitioner commitment  
• Practitioner roles-educator, mentor, resource, witness, guide, storyteller, collaborator  
• Practitioner characteristics-nonjudgmental, patience, honesty, flexible, compassionate |
| Client commitment | • Autonomy  
• Participation |
| Practitioner knowledge, experience, application of skills and available resources | • Different ways of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential, traditional  
• Critical thinking-problem-solving, assimilating and synthesizing information, evaluating sorting, differentiating, prioritizing, investigating  
• Communication  
• Tangible resources: modern research, traditional systems of herbs, biological and human sciences, medical sciences, pharmacology, materia medica, other practitioners |

**Tailoring Herbal Medicine**

*Tailoring Herbal Medicine* is a decision-making subprocess of PWHM that is conditioned upon *Exploring the Personal Composition* and *Interpreting Dissonance in the Personal Composition*. *Tailoring Herbal Medicine* is coupled with *Facilitating Success with Complementary Actions* to set the stage for and leading to *Evaluating Outcomes* as the consequence. *Tailoring Herbal Medicine* is a subprocess whereby personal herbal medicines are designed, tailored, and tuned to fit the person, resulting in a cohesive personalized herbal
Tailoring Herbal Medicine concludes with the formulation of personal herbal medicine.

Creating Concordance explains Tailoring Herbal Medicine. During this phase, WHM practitioners tailor, fit, or match herbal medicine to the person with chronic disease with concordance or right relationship between the person and the herbal medicine as the intended outcome. Right relationships or connection between the plant medicine and the person at multiple levels increases right relationships within and extending out from the whole personal system. Right relationships increase integrity, energy, and coherence in the whole person.

Tailoring Herbal Medicine is accomplished with strategies mediating the steps to better assure success.

The subprocess Tailoring Herbal Medicine utilizes the interpretations of dissonance to establish the client goals and intentions for the medicine tailoring personalized herbal medicine in a five-step process (Figure 2). First, treatment goals and intentions of the medicine are identified and then targeted herbal actions that address these goals and intentions are defined. Next, potential therapeutic herbs attributed with the targeted herbal actions are identified for further consideration. Finally, the multiple potential herbs are reduced to the selected herbs to be used, resulting in the final formulation of personalized herbal medicine. Strategies are used for each step of the subprocess and the formula is fine-tuned during the last step of reduction with strategies to increase the potential success and concordant effect and fit of the herbal medicine.

Tailoring Herbal Medicine is defined by six properties: steps to tailor herbal medicine to the whole person, strategies for Tailoring Herbal Medicine, the therapeutic relationship, client
commitment, knowledge, experience, and application of skills, and resources for formulation.

Table 5 presents the function *Tailoring Herbal Medicine* along with the associated properties and dimensions. The first property indicates the focus of *Tailoring Herbal Medicine* and the last five indicate how this is accomplished.

**TABLE 5. Tailoring Herbal Medicine**

<table>
<thead>
<tr>
<th>Property</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantive: The focus of <em>Tailoring Herbal Medicine</em> is:</td>
<td>Steps to tailor herbal medicine to the whole person: 1. Identifying treatment goals. 2. Defining associated herbal actions. 3. Delineating herbs matching the actions. 4. Reducing the alternatives to specific herbs. 5. Personalized herbal medicine</td>
</tr>
<tr>
<td></td>
<td>• Setting the intention of the herbal medicine and establishing client goals-directing and prioritizing-primary, secondary • Assigning herb categories to needed actions and indications-pharmacologic, energetic, tissue states, symptoms • Identifying herbs from categories to indications or actions (multiplying the alternatives), • Evaluating the alternatives • Filtering the alternatives down to possibilities • Selecting appropriate herbs, tuning • Concordance, harmony, vibration</td>
</tr>
<tr>
<td>Methodological: <em>Tailoring Herbal Medicine</em> is accomplished with:</td>
<td>Strategies for Tailoring Herbal Medicine</td>
</tr>
<tr>
<td></td>
<td>• Treating the whole person with chronic disease • Increase the probability of success of herb selection • Limit the number of herbs in formulation • Integrating and applying the herbal medicine • Pharmaceuticals</td>
</tr>
<tr>
<td>Property</td>
<td>Dimension</td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Methodological: Tailoring Herbal Medicine is accomplished with:</td>
<td>The therapeutic relationship • Partnering with the client • Client-centered approach • Interactive • Trust building and nurturing • Time-involved • Directional or purposeful • Practitioner commitment, • Practitioner roles-educator, mentor, resource, witness, guide, storyteller, collaborator • Practitioner characteristics-nonjudgmental, patience, honest, flexible, compassionate</td>
</tr>
<tr>
<td>Client commitment</td>
<td>• Autonomy • Participation</td>
</tr>
<tr>
<td>Practitioner knowledge, experience, and application of skills</td>
<td>• Different ways of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential (relationship with plants), traditional • Herbal knowledge: bioregional herbs, natural environments and source of herbs, medicinal parts, research, lore, signature, uses, actions, affinities, indications, energetics, qualities, safety profiles, source of safety profile, interactions, traditions of use • Belief in herbal medicine • Communication • Critical thinking including abilities to problem-solving, assimilate information, sort, differentiate and prioritize • Tangible resources: modern research, traditional herb resources and systems of herbs, biological and human sciences, medical sciences, pharmacology, materia medica, other practitioners</td>
</tr>
<tr>
<td>Personal herbal medicine is formulated with resources</td>
<td>• Available herbs • Tangible resources • Bioregional or local, conservation • Mental models: o Chord: ground, middle, high notes with minors and grace notes o Primary + secondary + synergist o Primary herb for problem + second herb for constitution + third herb to direct or push + fourth for synergy + tipping herb o Chief + augmenter + supportive + conductive + corrigent or harmonizer</td>
</tr>
</tbody>
</table>
Facilitating Success with Complementary Actions

The next step of PWHM is *Facilitating Success with Complementary Actions*. *Facilitating Success with Complementary Actions* is dependent on the preceding steps: *Exploring the Personal Composition, Interpreting the Dissonance in the Personal Composition, and Tailoring Herbal Medicine*. *Facilitating Success with Complementary Actions* functions in concert with *Tailoring Herbal Medicine* to complement the fit of the herbal medicine. This step leads to *Evaluating Outcomes*. *Facilitating Success with Complementary Actions* represents therapeutic interventions, actions, and options that are different than herbal medicines but used in conjunction with herbal medicines to facilitate the success of the herbal medicine. *Weaving a Tapestry of Right Relationships* is the theme of this step, with right relationships supported by the complementary actions herbal practitioners take with their clients. Each complementary action contributes additional thread or elements woven into the tapestry or overall pattern of organization of right relationships and emergent healing. *Facilitating Success with Complementary Actions* comprises the fourth step in the formulation of personalized herbal medicine.

*Facilitating Success with Complementary Actions* is defined with six properties: psychosocial support, educational support, adjunctive treatments, therapeutic relationship, client commitment, and knowledge, experience, and application of skills. Table 6 presents the fourth step *Facilitating Success with Complementary Actions* along with associated properties and dimensions. The three substantive properties provide the focus of this step while the three methodological properties identify how it is accomplished.
TABLE 6. Facilitating Success with Complementary Actions

<table>
<thead>
<tr>
<th>Properties</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantive: The focus of Facilitating Success with Complementary Actions is:</td>
<td></td>
</tr>
<tr>
<td>Psychosocial support</td>
<td>• Empowerment</td>
</tr>
<tr>
<td></td>
<td>• Strength and self-awareness building</td>
</tr>
<tr>
<td></td>
<td>• Trust</td>
</tr>
<tr>
<td></td>
<td>• Listening</td>
</tr>
<tr>
<td></td>
<td>• Care</td>
</tr>
<tr>
<td>Educational support</td>
<td>• Herbal medicines</td>
</tr>
<tr>
<td></td>
<td>• Self-care</td>
</tr>
<tr>
<td></td>
<td>• Diet</td>
</tr>
<tr>
<td></td>
<td>• Lifestyle-removal of irritants, exercise, meditation, stress relief, appropriate alcohol use</td>
</tr>
<tr>
<td></td>
<td>• Conventional medical therapies-appropriate application of diagnostics and pharmaceuticals</td>
</tr>
<tr>
<td></td>
<td>• Appropriate nutritional supplement usage</td>
</tr>
<tr>
<td>Adjunctive treatments</td>
<td>• Referrals to conventional practitioners</td>
</tr>
<tr>
<td></td>
<td>• Referrals to complementary and alternative (CAM) practitioners: bodywork massage, acupuncture, nutrition</td>
</tr>
<tr>
<td></td>
<td>• Nutritional supplements</td>
</tr>
<tr>
<td></td>
<td>• Gardening</td>
</tr>
<tr>
<td>Methodological: Facilitating Success with Complementary Actions is accomplished with:</td>
<td></td>
</tr>
<tr>
<td>The therapeutic relationship</td>
<td>• Partnering with the client, partnering with plants</td>
</tr>
<tr>
<td></td>
<td>• Client-centered approach, purposeful</td>
</tr>
<tr>
<td></td>
<td>• Interactive</td>
</tr>
<tr>
<td></td>
<td>• Trust building and nurturing</td>
</tr>
<tr>
<td></td>
<td>• Time involved</td>
</tr>
<tr>
<td></td>
<td>• Practitioner commitment,</td>
</tr>
<tr>
<td></td>
<td>• Practitioner roles-educator, mentor, resource, witness, guide, collaborator, storyteller</td>
</tr>
<tr>
<td></td>
<td>• Practitioner characteristics-nonjudgmental, patience, honesty, flexible, compassionate</td>
</tr>
<tr>
<td>Client commitment</td>
<td>• Autonomy</td>
</tr>
<tr>
<td></td>
<td>• Participation</td>
</tr>
<tr>
<td>Practitioner knowledge, experience, and application of skills</td>
<td>• Different ways of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential, traditional</td>
</tr>
<tr>
<td></td>
<td>• Communication</td>
</tr>
<tr>
<td></td>
<td>• Requisite skills and knowledge for complementary actions- nutrition, healthy lifestyle, CAM therapies, conventional medical and pharmaceutical therapies, nutritional supplements</td>
</tr>
</tbody>
</table>

**Evaluating Outcomes**

The final step in PWHM is *Evaluating Outcomes*. Although evaluation represents a final step in the process, it may signal or result in a return to earlier functions of the process to modify the herbal medicine or complementary actions, thereby generating back and forth movement similar to weaving a tapestry throughout the process of personalizing herbal medicines.

*Evaluating Outcomes* is dependent on all of the previous steps of the process. While the
evaluation of outcomes takes place, to some extent, immediately with evaluation of the fit of the medicine, it is primarily conducted in a follow-up encounter separate from the primary encounter. It represents adjustments or continuation and potentially conclusion to the process of PWHM.

*Evaluating Outcomes* is evaluation of the movement towards righting or balancing assisted by right relationship between the personalized medicine and the person along with complementary actions that place the person in the right condition or relationship to heal. *Evaluating Outcomes* is evaluation of right relationships or righting relationships. *Evaluating Outcomes* is the determination of value or significance of the individualized herbal medicine and the complementary actions through assessment of client responses. It is consideration of the dynamic patterns of the elements of the whole that support coherence (Quinn, 2000) and concordance or the agreement between the person, the herbal medicine, and complementary actions.

*Evaluating Outcomes* is defined with six properties: herbal medicine fit, fit plus person shift, restoration of dynamic equilibrium, therapeutic relationship, client commitment, and knowledge, experience, application of skills and time. Table 7 presents the final step or function of PWHM along with three substantive properties providing the focus of this step and three methodological properties describing how this step is accomplished. Dimensions of each property are identified.
### TABLE 7. Evaluating Outcomes

<table>
<thead>
<tr>
<th>Property</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantive: The focus of Evaluating Outcomes is:</td>
<td>Herbal medicine fit</td>
</tr>
<tr>
<td></td>
<td>• Client response/toleration/receptivity/ sensitivity/taste</td>
</tr>
<tr>
<td></td>
<td>• Lifestyle congruence</td>
</tr>
<tr>
<td></td>
<td>• Practitioner knowing</td>
</tr>
<tr>
<td></td>
<td>• Adaptations as dynamics change or if herbal medicine does not fit</td>
</tr>
<tr>
<td>Fit plus person shift</td>
<td>• Movement or change in direction of goals and intentions, disease dynamics/ client dynamics</td>
</tr>
<tr>
<td></td>
<td>• Subjective/qualitative/large/subtle</td>
</tr>
<tr>
<td></td>
<td>• Direction/symptoms/awareness/ tangible</td>
</tr>
<tr>
<td></td>
<td>• Time dependent</td>
</tr>
<tr>
<td></td>
<td>• Modifications-adaptations, changing form, dose, medicine</td>
</tr>
<tr>
<td>Restoration of dynamic equilibrium</td>
<td>• Functional flexibility</td>
</tr>
<tr>
<td></td>
<td>• Integration</td>
</tr>
<tr>
<td></td>
<td>• Individual process</td>
</tr>
<tr>
<td></td>
<td>• Clearing a path, opening channels movement or flow of energy</td>
</tr>
<tr>
<td></td>
<td>• Change over time</td>
</tr>
<tr>
<td></td>
<td>• Balancing energies to mitigate tendency to imbalances</td>
</tr>
<tr>
<td></td>
<td>• Herbal medicine alternatives (change, maintain, episodic, discontinue)</td>
</tr>
<tr>
<td>Methodological: Evaluating Outcomes is accomplished with:</td>
<td>The therapeutic relationship</td>
</tr>
<tr>
<td></td>
<td>• Partnering with the client, partnering with plants</td>
</tr>
<tr>
<td></td>
<td>• Client-centered approach, purposeful</td>
</tr>
<tr>
<td></td>
<td>• Interactive</td>
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<tr>
<td></td>
<td>• Trust building and nurturing</td>
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<td></td>
<td>• Time involved</td>
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<tr>
<td></td>
<td>• Practitioner commitment,</td>
</tr>
<tr>
<td></td>
<td>• Practitioner roles-educator, mentor, resource, witness, guide, storyteller, collaborator</td>
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<tr>
<td></td>
<td>• Practitioner characteristics-nonjudgmental, patience, honesty, flexible, compassionate</td>
</tr>
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<td>Client commitment</td>
<td>• Autonomy</td>
</tr>
<tr>
<td></td>
<td>• Participation</td>
</tr>
<tr>
<td>Practitioner knowledge, experience, application of skills, and time</td>
<td>• Different ways of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential, traditional</td>
</tr>
<tr>
<td></td>
<td>• Communication</td>
</tr>
<tr>
<td></td>
<td>• Tangible resources</td>
</tr>
<tr>
<td></td>
<td>• Follow-up- requisite skills and knowledge for evaluation</td>
</tr>
<tr>
<td></td>
<td>• Tending-garden</td>
</tr>
</tbody>
</table>

**Pathways through Personalizing Western Herbal Medicine**

For conceptual purposes, the process of PWHM may be viewed as steps with forward movement beginning with *Exploring the Personal Composition* and ending with *Evaluating Outcomes* of the personal herbal medicine. However, given the nature of herbal medicine, there is the potential for flexibility and back and forth movement in an otherwise sequential process.
The “last” step, *Evaluating Outcomes*, may require the herbalist to revisit one or all of the steps so that the herbal medicine and complementary actions may be modified and fine-tuned to attain the objective of concordance.

When herbal medicines are tailored to the person, along with complementary actions, the fit of the herbal medicine and shift in the client in relation to the disease are evaluated. If the herbal medicine fits or is concordant with the person, shift is expected after the passage of a period of time. If fit and shift are evidenced, then restoration of dynamic equilibrium is expected over time. However, if there is no fit, the process of PWHM is re-engaged to gather more information by further *Exploring the Personal Composition, Interpreting Dissonance in the Personal Composition*, or at the level of *Tailoring Herbal Medicine* to make immediate modifications to the herbal medicine. If the lack of fit is known to be related to a specific herb or herb combination in the herbal medicine, the process will be engaged at the level of *Tailoring Herbal Medicine* with simple adjustments of the herbal formula. If the reason for the lack of fit is unknown, the process will circle back to the first step.

Evaluating client shift is time dependent, occurring weeks to months after the encounter that resulted in the herbal medicine. Evaluation for the presence or absence of client shift would likely result in periodic follow-up encounters where information would be updated, interpretations revisited, and herbal medicines attuned or changed along with the reinforcement or alterations of complementary actions. If shift is not seen or is minimal in relation to expectations, the process of PWHM can be re-engaged at any step. Where the process is re-engaged is likely a function of time and shift in relation to treatment goals and intentions. Likely, the process will be re-engaged at the beginning and in a modified form. If the process is re-engaged at the step of *Interpreting Dissonance in the Personal Composition*, there will be a back
and forth movement to *Exploring the Composition* to verify or gather new information. This movement back through the steps of the process may result in modifications and fine-tuning the herbal medicine or changes to the complementary actions.

Finally, if the personal herbal medicine fits and is aligned with the treatment goals and no further modifications are needed and a shift is identified, over time evaluation moves to restoration of dynamic equilibrium. With restoration of dynamic equilibrium, as uniquely defined by each person, there may be a continuation of the herbal medicine. The medicine may be recommended for acute episodes only, the medicine may be modified to a nutritive or tonifying formula, or the herbal medicine may be discontinued. Figure 3 presents the process of PWHM and the pathways through the process.

**FIGURE 3. Pathways through the Process of PWHM.**

**Mediating and Moderating Factors**

The process of and outcomes to PWHM vary as a function of existing structures of WHM and society as a whole. Likewise, characteristics of the encounter, practitioner, and client
influence both process and outcomes. While often antecedent and contextual to PWHM, these structures and characteristics also directly and indirectly affect the process and the outcome. Even though the social-cultural structures are beyond the scope of the current study, aspects of the structures and characteristics impact our understanding of the process by acting as either barriers or facilitators of the process and outcomes and are considered to be mediating and modifying factors to the processes described in this study.

Mediating and moderating factors indirectly influence interventional processes and the effectiveness of outcomes. Mediators are defined as factors or characteristics that influence the process and outcomes, thereby explaining what occurs or how something occurs; whereas, modifiers refer to factors and variables that change or affect the process, action, or outcome. A mediator may be the client or practitioner’s belief in the effectiveness of herbal medicine and a modifier might be additional health care treatments the client receives. Both mediating and modifying factors potentially influence the process and outcomes resulting in variability from individual effect, additive effect of multiple factors together, or from the interactive or interrelatedness of the factors. The potential contributions of factors as mediating and moderating or as either facilitating or impeding the process and outcomes to PWHM are identified in table 8. The specific roles and values of factors and interactions of mediating and moderating factors were not fully explored in this study.

Socio-cultural structures contextualizing the process of PWHM and weaving a tapestry of right relationships and creating concordance include beliefs and assumptions, rules, roles, and mores of WHM and the cultural image and esteem or perception of the value of the herbalist in society. Of particular interest were beliefs relating to the person, health and healing, disease, and the relationship to the eco-environment. While antecedent, these commonly held beliefs and
assumptions likely impacted the process and outcomes of PWHM and can be either mediating or moderating. Likewise, client-related characteristics, practitioner-related characteristics, and environmental characteristics influence process and outcomes of PWHM. Table 8 summarizes the more poignant mediating and moderating variables.

**TABLE 8. Mediating and Moderating Factors**

<table>
<thead>
<tr>
<th>Potential Moderators</th>
<th>Potential Mediators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Structural</strong></td>
<td></td>
</tr>
<tr>
<td>• Economic cost, social value/image, trust, beliefs, regulation or restrictions on formulation freedom</td>
<td>• Absence of regulation or freedom to formulate, social value, cost, trust, beliefs</td>
</tr>
<tr>
<td><strong>Client Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>• Life experiences, attitudes, beliefs, expectations, motivation, communication skills, fear, anxiety, time to follow-through, knowledge</td>
<td>• Personal resources, demographics, attitudes, receptivity, expectations, risk taking, self-care, relationship with plants, communication skills, knowledge</td>
</tr>
<tr>
<td>• Social networks, economic resources, biogenetics, lifestyle, family history, health history, history with herbal medicine, pharmaceuticals and CAM, health beliefs, time with chronic disease</td>
<td>• Biogenetics, time with chronic disease, health beliefs, experience, lifestyle</td>
</tr>
<tr>
<td><strong>Practitioner Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>• Attitudes, creativity, beliefs, experience, education, skill set, communication, knowledge, resources, social networks, autonomy, risk-taking, professional support</td>
<td>• Commitment, relationship with plants, experience, education, skill set, communication, attitudes, demographics, resources, roles, autonomy, risk-taking, knowledge</td>
</tr>
<tr>
<td><strong>Environmental Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>• Physical setting, lack of history, lack of trust, practice style, accessibility</td>
<td>• History of relationship, rapport, trust, practice styles, accessibility</td>
</tr>
<tr>
<td><strong>Herbal Medicine Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>• Availability of herbs, taste, convenience, dose, frequency, length of time, cost</td>
<td>• Availability of herbs, taste, convenience, dose, frequency, length of time, cost</td>
</tr>
</tbody>
</table>

**Summary**

This section provided an overview of the BSPP of PWHM. The theory proposes a five-step process of *Exploring the Personal Composition, Interpreting Dissonance in the Personal Composition, Tailoring Herbal Medicine, Facilitating Success with Complementary Actions,* and *Evaluating Outcomes.* A decision-making subprocess of *Tailoring Herbal Medicines* includes the steps of *Identifying Treatment Goals, Defining Associated Herbal Actions, Delineating Potential Herbs Matching the Actions,* and *Reducing Alternatives to Specific Herbs* using focused strategies resulting in *Personalized Herbal Medicine.* Pathways through the process with positive and negative outcomes were presented. Pathways progress to restoration of dynamic
equilibrium or loop back through the process for modification and fine tuning of the personal herbal medicine before progressing to restoration of dynamic equilibrium.

*Weaving a Tapestry of Right Relationships* represents the theme and the phenomenon that links each step in the process of PWHM. *Creating Concordance* is the right relationship between the person and the herbal medicine and constitutes the core concept or phenomenon for the subprocess *Tailoring Herbal Medicine*. *Creating Concordance* refers to the process of matching or fitting herbal medicine to the individual with personalized herbal medicines. *Creating Concordance* is embedded in *Weaving a Tapestry of Right Relationships*. Right relationship is explained in knowing each person’s variations, interpreting where there is dissonance, and defining what the dissonance is in terminology amenable to herbal medicine, tailoring herbal medicine, implementing complementary actions to support right relationships, and, finally, in evaluation as the final step of the process of PWHM.

Western herbal medicine formulation is embedded in the socio-cultural structures of WHM. While structural variables and characteristics influencing this process were not the focus of the study, aspects of these structures and characteristics impact the understanding of the process of PWHM. The structures and characteristics influencing this process are considered as mediating and moderating factors.

Each step of the process of PWHM will be detailed in the following sections. The steps through the process will be defined and described using words from the participants and illustrated with excerpts from the interviews. Interview number and code number is used to reference each participant.
Explanations of Personalizing Western Herbal Medicine

The BSPP of PWHM is a five-step process that includes a five-step subprocess of Tailoring Herbal Medicine. The core concept of Weaving a Tapestry of Right Relationships explains what herbal practitioners do to formulate personalized herbal medicine. The core concept links each step of the process. The core concept of the subprocess Tailoring Herbal Medicine is Creating Concordance. Creating Concordance is embedded in Weaving a Tapestry of Right Relationships and links each step of Tailoring Herbal Medicine.

Right relationship is defined as configurations or connections of elements that contribute to a whole system by increasing the coherence of the whole (Quinn, 2000). To weave a tapestry of right relationships is to interlace together multiple threads that interact to create a unified integrated whole with emergent order and coherence. Herbalists weave a tapestry of right relationships with the therapeutic relationship, client commitment, knowledge, experience, skills, and resources to gather information on the whole person, interpret that information, fit the medicine to the person, support the herbal medicine with complementary actions, and evaluate the outcomes. Harmony is wholeness that reflects right relationship. Sal, one of the study participants, described raising the vibration and interrupting a pattern with herbal medicine as part of the process of formulating personal herbal medicines. “I use plants, often to raise the vibration, or interrupt a pattern. Same thing really…” (I-11:39, 40).

Concordance between the person and the herbal medicine is bringing about agreement, accordance, and consonance between the person seeking treatment and the herbal medicine formula designed for the person. Concordance between the herbal medicine and the person exists essentially independent of the practitioner. It refers to a match between the herbal medicine and the person. The practitioner, while tailoring the medicine, is marginally entangled with or a
minimal part of concordance between the herbal medicine and the person. Concordance is the right relationship between the whole person with chronic disease and the herbal medicine and is achieved by matching specific herbs to the person at the levels of constitution or energetics, symptom variations and causation, and supporting mechanisms or structures. Cammie talked about concordance between the herbal formulation and the person as harmony.

“I like to kind of harmonize what’s going on with them kind of with their personality a little bit, as well as helping, you know, the whole purpose of why I’m giving the adaptogen, but to really help them with that, but I do like to have a little bit of harmony going on between them and the herb” (I-6:38, 39).

For Ashwa, the process of formulating personal herbal medicine was a process of *Creating Concordance*, with concordance as outcome defined as frequencies in the same physical space.

“In that moment if it’s a good fit, then that client’s body, mind and spirit will be receptive to that, they will be moved by that…so it’s gotta kind of match the frequencies a little bit in order to have something of an effect. We have multiple frequencies in the same physical space happening …so I’m looking for concordance” (I-8:65, 66).

This section describes the process of *Personalizing Herbal Medicine* for persons with chronic disease using the words of the participants. This narrative is organized by the substantive and methodological properties listed in the tables from the preceding section. The applicable part of the table is included for each property with the narrative. While some methodological properties span all the steps, they will only be discussed fully in the step in which the property is initiated in or most relevant to. For instance, therapeutic relationship and client commitment will only be discussed in the first step. Knowledge and application of skills also applies to all the steps. Different dimensions of this property are discussed in steps where the dimensions are most relevant. The provided quotations support the dimensions listed in the tables, but there is not a separate quotation for every dimension. Likewise, for the purpose of constructing an integrated
narrative, not every dimension is introduced or restated before or after the quotations. For the
sake of an integrated narrative, quotations may not be in the same order as they are stated in the
tables. For the sake of parsimony, when possible, quotes were used that cross dimensions or
apply to more than one dimension. To avoid repeating quotations, quotes pertaining to one
property may be included in a different property because they are more relevant where they are.
For instance, joy is a dimension of exploring the whole person context, but is included in a
quotation used for the discussion of knowledge and skills. Quotations were selected because of
their explanatory or unique nature for depth and description. Some dimensions were covered
with simple quotes while other dimensions were explained in detail. This, in part, reflects the
length and detail of the dialogue with the participants that was necessary to add depth to the
category or to comprehend the subject or dimension. The dimensions discussed in the narrative
are in the tables included with each property.

**Step One: Exploring the Personal Composition**

*Exploring the Personal Composition* is the first step of PWHM. *Exploring the Personal
Composition* is interactive and defined as gathering information over time. The information
gathered is extensive. The assessment process reflects a time-intensive holistic assessment of the
person. Sal, a participant in this study, talked about the time she spends gathering data in the “....
first interview, which could last 90 minutes to two hours” (I-11:14). *Exploring the Personal
Composition* is characterized by substantive properties (focus) and the methodological properties
(how).

*Exploring the Personal Composition* focuses on gathering information pertaining to the
experience of the client with chronic illness, including the person’s context, health landscape,
and energetic patterns. The methodological properties are the therapeutic relationship, client
commitment, knowledge, experience, and the application of skills necessary to gather the information for PWHM. This step is the first step explaining how herbalists personalize herbal medicines by weaving a tapestry of right relationships. The following examples, taken from participant interviews, illustrate the dimensions PWHM and *Weaving a Tapestry of Right Relationships*.

**Property: Exploring the whole person context.** Gathering information for the herbalist is assessing the whole person within their unique context. The context is the weaving of interconnected conditions that gives meaning to experience. The property of whole person context has dimensions of socio-cultural milieu, personal resources, and environmental resources (see Table 9).

<table>
<thead>
<tr>
<th>TABLE 9. Property: Exploring the Whole Person Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Socio-cultural milieu: Socio-relational, mental, emotional</td>
</tr>
<tr>
<td>• Personal resources: Sense of self (self awareness), strengths and resilience, purpose, joy, contentment, ability to change, spiritual health</td>
</tr>
<tr>
<td>• Environmental resources: Connections to plants/earth</td>
</tr>
</tbody>
</table>

Marsha poignantly addressed the socio-cultural milieu or context of the person when she stated that:

“...the whole spectrum, from genetics, diet, thoughts, choices, foods, environment, you know, psycho-spiritual, you know, neighbor’s jealousy, it’s a whole gamut of physical, mental and spiritual realms that we navigate. It’s not one, I think it’s basically life and our relationships and how we’re engaged with life is what causes this injury” (I-5:15).

The holistic assessment of the person’s context includes gathering information on resources and the client’s sense of “self-awareness” (I-5:14). Rose included questions to ascertain “where is this person and how strong or resilient are they right now, physically, emotionally, spiritually?” (I-3:67). Likewise, Ashwa reported that:

“We need to get a sense of how quickly does this person respond to changes, how
quickly do they learn, do they reintegrate new information, how quickly can their metabolism retool to doing things differently, to digesting new types of foods in managing their fuels” (I-8:89).

The socio-cultural milieu of the client was viewed as an important variable in personalizing herbal medicine. Ginny said it was important to understand the context of life, “…because they’ll come in with a diagnosis from an AMA doctor and I try to help them understand that in the bigger context of how their life is or is not working…” (I-7:29). In whole person assessment, Flora assesses relationships along with lifestyle. Flora illustrated this when she said, “relationships can be contributing positively or negatively. It can be their diets. It can be their lifestyle. If they don’t get out and walk, if they don’t get out and take initiative…” (I-1:98). Ellie considered information on the person’s relationship with plants important for weaving the right relationships. “If a person has a particular affinity, I will ask people, are there plants that you really love or that you’re curious about, or have been coming to your attention lately... I try to bring those plants in” (I-15:12, 13). Ginny considered a person’s relationship to the earth as an essential variable in health when she portrayed that, “The essence of what causes disease is when someone loses their connection with the earth. So somewhere along the line, that broke off, or maybe it was always tentative” (I-7:19).

Exploring the person’s context entails consideration of the person’s socio-cultural milieu and encompasses relationships and mental, emotional, and spiritual characteristics. *Weaving a Tapestry of Right Relationships* relies upon gathering information about the client’s personal resources including the sense of self, purpose, the ability to change, strengths, and resilience. An essential part to knowing the context of a person’s life is to assess environmental resources as expressed in the person’s connection to the earth or plants.
**Property: Exploring the whole person health landscape.** The personal health landscape was a term used by Ginny in reference to the collective health experience of each person when she said, “I try to help them orient themselves to the landscape of their health” (I-7:58). Health landscape is the cumulative synthesis of factors and elements relating to individual expressions and supporting factors of health and disease. Health landscape was also referred to as terrain. The concept of health landscape is used in *Weaving a Tapestry of Right Relationships* to refer to the factors and circumstances the client relates to their current health and disease processes and is a property of *Exploring the Personal Composition*. The dimensions include ground substance, chronic disease, health history, and life choices (see Table 10).

**TABLE 10. Property: Exploring the Whole Person Health Landscape**

| • Ground substance/contours, stress, challenges, review of systems |
| • Health history, history of treatment, healing strategies, history with herbal medicines |
| • Chronic disease: Current symptoms, modes of presentation, variations, diagnosis |
| • Life choices, style, experiences |

Herb referred to the ground substance in the health landscape as the weaving of factors that support health “the ground substance; the terrain is the warp and woof of biopsychosocial spheres” (I-2:39). Flora identified factors and elements of the personal health landscape. “… I address diet, and lifestyle and also herbs, supplements, medications, and we go over all those things” (I-1:30). Sal added that she has clients “…physically bring all the vitamins, prescriptions, OTCs, herbs, everything they’re taking” (I-11:13). Tilia underscored the extensiveness of the health history information gathered on each person.

“We are looking at their stress levels, we are looking at their biological needs, we are looking at their injury or disease health challenges, we are looking at what sort of therapy they have previously undergone…whether that’s surgical, whether that’s antibiotic therapy…all their pharmaceuticals, at all their environmental stress exposures…” (I:12:5, 6).
Cammie expressed the holistic nature of assessment when she said “their whole system is working together as a whole” (I-6:13). Flora emphasized that gathering information on the differential nature of every person’s presentation was essential to *Weaving a Tapestry of Right Relationships*.

> “Everybody who might have the same illness, they might appear differently. They’ll respond differently, present differently, so, it depends, that’s why you use individual formulas. So, not everyone with lupus is necessarily going to look alike…How is that anxiety manifesting? Some people, they get a lot of butterflies in their stomach and it just kind of spreads all over, they have muscle tension, other people may get a racing heart for example, they feel like their heart is pounding, some people get sweaty palms…” (I-1:12,36).

Health landscape also encompasses the “life and choices affecting their health as well as the treatment they’re bringing forward” (I-5:12). Rose used the health landscape to direct *Weaving a Tapestry of Right Relationships* and gathered information on the current life choices, beliefs associated with what is occurring, reasons for the consultation with the client, goals, and the details relating to the personal, social, familial, and historical context of the current situation.

> “Their medical history, their family medical history, their social history, and their diet… I have questions that run through all the body systems…I ask them at the very end, I ask them, what do you need to be more in balance? I ask what’s in the way, what’s holding you back from this?” (I-3:19-22).

Cal talked about his assessment of the person’s history with herbal medicines noting that “Some people do have a good amount of experience and know that they don’t like certain herbs, so I try to ask them, in hopes that they might know, before I make a formula they’re not gonna want” (I-4:55). Cammie also considered past experiences with herbs to be important in setting the groundwork for creating concordance. This was evident when she said, “Some people come in having already been on herbs in the past, and they can tell me what worked and what didn’t work for them; what they liked, what they didn’t like and so that’s taken into consideration” (I-6:38).
Chronic disease was considered as an integral component of the health landscape, a net force, energy, or irritant that pulls the organisms or threatens to pull them to the periphery of their energetic fields or disconnects them from the earth. Rose perceived cancer as “… a big pull out of balance, like there’s a big physical pull out of balance and it also pulls a lot of people emotionally and spiritually out of balance” (I-3:11). Disease was referenced as Western medical diagnoses with symptom profiles and corresponding pathophysiology, but understanding the landscape of the disease includes more than just understanding the diagnosis or symptoms. Ginny elaborated on this by explaining: “…So, I encouraged her to alter her strategy for healing that condition, from just a purely physical level to looking at some of the emotional, spiritual dimensions of it” (I-7:30).

Disease as a component of the health landscape was described as blockage, constriction, depletion, sluggishness, relaxation, stagnation, or excess and loss of connection. “There’s two kinds of damp in there,” explained Ellie “which are, flowing damp and stuck and boggy in the tissue damp, so relaxation is kind of the flowing version and damp, you know, stagnant is kind of the stuck version...” (I-15:53). Disease is a personal experience where persons with the same illness “… respond differently, appear differently…” (I-1:12). Rose addressed the personal nature of the health landscape as “every person’s balance looks different in what they need to support them to move that balance, is different for each person and changes for each person over time too” (I-3:7). Disease is also what interferes with the natural movement and flow of energy of the person or between the person and the energetic fields they are in interaction with. As Rose portrayed,

“…sometimes I use water imagery…if you imagine a river and if there’s a huge boulder in the middle of it, there’s a block there, and also what is happening to the
water around it? It gets moved out of its channel and it gets displaced and so what does that displaced water, that displaced energy, do to that person?” (I-3:87).

Health history, disease presentation, and life choices were assessed as part of the health landscape. Herb talked about *Weaving a Tapestry of Right Relationships* as being dependent on knowing all the variables associated with the current health circumstances.

“I’m going to want to know all the parameters around, well, we could call it modes or presentation when its worse, when it began, what were the precipitating circumstances to this condition, is actually one of the more critical items across the board for all the forms of inquiry. Modes being when its worse, when its better, in terms of time and in terms of activity, pictures of activity. So those are all going in the focused clinical exam and inquiry” (I-2:6).

Exploring the Personal Composition by gathering information about the health landscape includes the holistic assessment of the person’s health and disease status and contributing factors and mechanisms. Knowledge of the health history, differential presentations, life choices, and health resources is foundational to *Weaving a Tapestry of Right Relationships*.

**Property: Exploring the whole person energetic patterns.** A property of *Exploring the Personal Composition* or aspect of assessing the whole person is gathering information on energetic patterns. Descriptions of persons as energetic organisms can be divided into two energetic models. One model describes the concept of energy as personal constitution. The second model describes energy as personal dynamic movement, fields, and as an integrating and ordering process. Models of energetics held by participants included constitutional herbalism (n=12) with one constitutional model being the Southern blood type, a Native American model with energy described as movement or spirit (n=1), energy as integrating and ordering process and field (n=3), and a heart-centered energetic model (n=1). Energetic profiles are identifiable from patterns and are not the same as energy referred to as vitality. Dimensions for exploring the
whole person energetic patterns are personal energy as movement, fields and organizing force, energetic profile as constitution, patterns, and differentiated from vitality (see Table 11).

TABLE 11. Property: Exploring the Whole Person Energetic Patterns

<table>
<thead>
<tr>
<th>Property</th>
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<tbody>
<tr>
<td>Movement, fields, organizing/integrating force</td>
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<tr>
<td>Constitution, stable, changing, tissue states, symptoms</td>
</tr>
<tr>
<td>Patterns: Unity or coordination of factors, energetic pattern as whole person pattern</td>
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<tr>
<td>Differentiated from vitality</td>
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Energetic models were used to comprehend and work conceptually with the person as a whole. The participants that utilized the concept of constitution equated it with energetics. As Sal said, “I am a constitution” (I-11:27). The formulation process for chronic disease compared to acute disease is differentiated by the use of energetic models with chronic disease. Tilia commented, “That [chronic disease] is more where you would deal more with the energetics or the constitutional type” (I-12:89). Flora conveyed that, “... the constitution and energetics become more important the more chronic an illness is...then it’s like, okay we really have to get deeper” (I-1:73).

Participants talked about energetics as being different from vitality. When participants spoke of persons as energetic organisms or energy as a net process with reference to energetic models used in herbal medicine, it differed from energy as vitality. Ashwa talked about energy as an energetic state when he said, “Some people have really, a lack of energy, other people have energy but don’t know how to direct it or transform it” (I-8:34). Vitality was defined as a physical state manifested by symptoms of fatigue (lack of vitality) or energy and assessed with objective or subjective measures. Herb differentiated between vitality and energy as constitution, field, or process when he said, “how the body produces vitality... it comes from... the air and the
food and the constitution. And so, I’m going to look at three features and try and understand which is the weakest component” (I-2:97).

Energetic expression “aggregates towards a pattern” (I-2:15). Patterns are meaningful configurations or confluences of subjective and objective phenomena (life events, relationships, emotional responses), characteristics, signs and symptoms, and pathophysiology that provide unity to what is occurring. Ellie considered patterns in the process of gathering information.

“I’m looking at physically, sort of what’s happening, is there a lot of tension in the body? …and sort of the person’s perception, their stress responsiveness or resilience is a big pattern that I look at, and then their immunologic sensitivity or competence or incompetence, I would say. Their digestion and elimination, sort of together, and yeah, metabolic pattern for sure” (I-15:47).

Ellie also discussed the interrelatedness of patterns.

“So for me, it’s, all of it is pattern, it’s either physical pattern that’s embedded within energetic pattern and all of that is often embedded in behavioral pattern. Like how they eat and how they interact with their environment and of course all of that is embedded in sort of ecological patterns…so for me the disease will always reflect an energetic pattern of dysfunction and so while I am not only looking at that, again, legally that’s what I can best look at” (I-15:44).

Rose viewed energy patterns as reflective of the physical, emotional and spiritual wellbeing of the person. “That pattern of energy is also being informed of what’s going on physically, what’s going on emotionally, what’s going on for them spiritually, what’s happening with their energy” (I-3:3).

Constitution was defined by participants as a unique personal signature or profile attributed to who the person is. Melissa said, “You get a sense of their constitution. In other words, you just get a sense of the person themselves…there’s some of the signature there that I definitely take into account” (I-10:6). Constitution is stable as a predominate expression of internal physiological “traits” (I-13:16) or tendencies and is changing from lifestyle factors. For
Sal, constitution “changes” and is “flexible and malleable” where the “range is bigger than we give credit for” (I-11:27, 32, 35). Constitutional change is often manifesting outwardly with temporal tissue states. Tissue states are described as “irritation, atrophy, relaxation, stagnant, depressed, and contracted” (I-15:52), and excitation.

Constitution represents the composite or unified person. “Through the constitution,” Ellie noted, “you’re really addressing the whole person…” (I-15:62). Melissa spoke of the observations of the person that contribute to understanding the constitution.

“…constitution, would be, what the whole skeletal frame looks like, how they look physically, how their demeanor is, if they’re very, like I said, nervous or antsy or very uptight. If they’re jittery, if they’re very laid back and have, you know, just have an attitude or they don’t, they’re not really engaged” (I-10:19).

Constitution can be further described using a coordinate plane (see figure 4) consisting of four polar qualities: hot, cold, (x axis) dry, and moist (y axis). The polarities might also represent four phases of matter: earth or solid, water or liquid, air or gas, fire or combustion. The person’s constitution is a natural “tendency” (I-15:34) to exist within a range that represents the net balance of the qualities defined by combinations of ranges of the polar characteristics relative to the origin or center intersection of the plane. The origin of the plane represents balance or the equal tendency and probability of all qualities. For example, the center represents balance between hot/cold and moist/dry. Towards the center of the axes would be ultimate flexibility where there would be movement around and integration of all the qualities but not an extreme projection of any of them. Ellie described this when she spoke about constitution:

“I know that we’re never gonna necessarily be at, on the center of the axes. And I don’t think that is the goal. What I’m looking for is that they’re closer to center and they actually move around sometimes, like it might be an ellipse, where they’re like hanging out most of the time and they kind of go in there every once in a while they can manifest some of those others” (I-15:34).
Polarities on the plane are represented as deficiency or excess. Excess is a deficiency of the polar opposite. Cold represents a deficiency of heat. Likewise, damp is excess and dry a deficiency of moisture. Cal talked about this as patterns of symptoms. “I could be looking at it as a series of symptoms that a person has which are subclinical, often, in nature but represent either some kind of polarity either in excess or deficiency…” (I-4:13). Although symptoms may cluster and provide clues to the constitution, the disease or current state and tissue states impact and move the energetics but are not the same as constitution. Energetic patterns are not the same as symptom patterns. Symptom patterns are manifestations of tissue states. The constitution represents a unifying energy integrating the whole person while symptoms represent a particular expression of physiology or matter. Ellie talked about the pairing of constitution with physiologic symptoms when *Exploring the Personal Composition*,

“…what do you see, hot, cold, damp, or dry, relaxed, you know, hyperactive, or deficient, and then we draw that from pulse and tongue and also just our impression of being with the person and then there’s the physiologic, which includes, technically, the pathophysiologic…So, that’s where things like, you know fatigue plus cold, plus, depressed, plus menopausal plus worse in winter,
possible hypothyroidism? Refer for diagnosis. So that’s kind of, those are the impressions” (I-15:49).

While constitution was discussed in terms of hot/cold and dry/moist combinations with the polarities representing excesses and deficiencies, the use of this system of classification was clarified as being pragmatic, simplistic, and understandable. According to Filip “We distill it down to the very simplest, hot and dry, or rather hot and cold, damp or dry. Because everyone can understand that” (I-14:4).

Energy was also discussed as movement, interactive fields, and as an organizing process. Participants who perceived energy as movement, fields, and organizing and integrating process did not use a constitutional model of energetics. Instead, to avoid using “... a cookie cutter approach to therapy” (I-14:6), they considered energy as moving, changing, and organizing when individualizing the treatment approach. Energy represents emergence of the whole person. As Rose reflected, “That pattern of energy is also being informed by what’s going on physically, what’s going on emotionally, what’s going on for them spiritually…” (I-3:3).

Cammie depicted the presentation of energy as fields. “We’re not just this physical body, so, just as we are a spiritual and an emotional and a psychological being, we also have this energy field around us” (I-6:17). She went on to say that the physical reflects the energetic and that personal energy is also an overall dynamic movement.

“The manifestations of something going on in the physical body, you see that in the energetic fields first. They kind of manifest out here and then it slowly works its way into the physical body if not addressed. So, energetically for somebody to always be keeping those channels open to be keeping a clear passage for the whole kind of breathing in and out of the energy to let that flow be very fluid within a person. I believe that’s what keeps us very, that is one of the things that keeps us very healthy” (I-6:18,19).
Similar to Cammie, Ashwa related that “we are fundamentally energetic in nature and energy informs matter and if we want things to change on a material level, a physiological level, we have to change the energetic nature” (I-8:31). He further described energy as an intelligent dynamic force that strengthens and creates new personal order.

“The vital force is dynamic, it’s malleable, it’s intelligent and it will, given the opportunity, it will strengthen, it will improve and it creates more balance in the body… homeodynamism is ever changing responses to a pattern of energy and intelligence…” (I-8:23,128).

Energy was also used to describe symptom presentations of clients. Rose identifies the pain of a migraine as trapped energy. “On a physical level there’s an energetic pattern of a migraine as a tensing, a clamping down and then the energy gets kind of trapped and fractured and creates pain” (I-3:23).

**Property: Therapeutic relationship.** Therapeutic relationship is the first methodological property delineating how Exploring the Personal Composition is accomplished. Therapeutic relationship is a time-involved partnership wherein the herbalist and client interact, develop trust, and work together. The dimensions of therapeutic relationship are listed in table 12 and include partnership, client-centered approach, time-involvement, interactiveness, trust building, and practitioner commitment, roles, and characteristics.

**TABLE 12. Property: Therapeutic Relationship**

- Partnering with the client, partnering with plants
- Client-centered approach, purposeful
- Interactive
- Trust building and nurturing
- Time involved
- Practitioner commitment,
- Practitioner roles-educator, mentor, resource, witness, guide, storyteller, collaborator
- Practitioner characteristics-nonjudgmental, patience, honest, flexible, compassionate
Partnering with clients was described by Filip as “...an exchange, a partnership” (I-13:82) and Flora believed the relationship was an important aspect of herbal medicine and *Weaving a Tapestry of Right Relationships*. “It’s important to spend some time with them, too, because just the relationship of being, spending time and talking to them is a very good thing just in and of itself” (I-1:96). Likewise, Herb said that within the therapeutic relationship “you become part of the therapy…” (I-2:73). This was elaborated on by Ashwa when he noted, “there’s as much medicine in patience, listening skills, compassion… as whatever is given as material medicine” (I-8:133). Rose said, “… to facilitate and to witness… be present with a client and give them full attention without judgment…sometimes that alone moves things for people, because a lot of people don’t have that anywhere in their lives” (I-3:34, 35).

Cammie portrayed the therapeutic relationship as a team that depends on trust and honesty.

“We’re working together, we’re a team and I want to have a very honest and trusting, open relationship with them. And if something isn’t working, then we’ll go to a Plan B, we’ll find something else, so it’s really, it’s a guide, it’s also a co-creative team player with them” (I-6:28, 29).

The therapeutic relationship includes a client-centered approach. Participants discussed the process of personalizing herbal medicine as depending on the person’s motivation, their expectations, and their purpose for the encounter. In establishing the person’s goals and intentions as a priority, participants partner with the client. This reflects the client-centered approach of the participants. Flora succinctly communicated that the focus of herbal medicine is the client when she said, “the process is really about the client… what kind of things are they willing to change” (I-5:14, 59). Marsha further clarified that the strength of the client-centered
approach “depends on the level of commitment, I feel from them, what their intention is…” (I-5:18). Likewise, Cammie said,

“And finding out what their goals actually are. What their expectations are, what their hoping for, what they’re looking for …It’s patient directed in terms of what they are hoping to achieve and what they realistically are going to do” (I-6:2, 4).

Marsha lets the person direct the process of formulating personalized herbal medicine by “meet[ing] people where they’re at” (I-5:11), while Ginny first “validate[s] for them what is happening for them…” (I-7:41). Herb focuses his efforts on “looking at what’s their priority” because “in the end it’s their decision…cause I have no dog in the hunt, it’s their hunt…” (I-2:67, 71). He also acknowledges that when his conclusions differ from the client, there is room for negotiation. “So I have to come to terms with the difference between my priorities and their priorities and that’s dialogue, it’s a negotiation” (I-2:67).

Sal pointed out that Weaving a Tapestry of Right Relationships depends on a shared and equal partnering between plants, the person, and the herbalists. If the person is not motivated or not able to participate in the process, healing is interrupted. “Herbalism is a partnership between plants and the herbalists and the individual and if any of those don’t work well, then, healing could be interrupted, disjointed” (I-11:30). Ashwa discussed that he felt it was essential that clients be heard in the herbal encounter, to know they are treated as truly unique individuals. “So clients don’t feel heard and there’s a deep sense of frustration about that, they want to be seen as individuals and want to feel like whatever recommendations I’ve made are part of their unique nature” (I-8:132).

The therapeutic relationship is further defined by the roles and characteristics of the practitioner. The roles of the practitioner are educator, guide, mentor, resource, witness,
storyteller, and collaborator. The therapeutic characteristics of the practitioner are openness, receptivity, flexibility, compassion, and being non-judgmental.

Rose considered her role to be that of facilitator. “I really see myself as a facilitator between the plants and my clients. That my plants are… the ones that are tending their health… and I’m just trying to introduce them to the right people to help them do that” (I-3:13). And Cammie acts as a guide, teacher and mentor. “My role, is really to guide them through all of it… my role is to be a teacher and kind of that mentor for them, but really a guide in helping them through the process” (I-6:26). Cammie succinctly defined her role as guide, teacher and mentor for her clients.

“My role is really to guide them through all of it and I mean, they’re coming to me because I have some expertise in certain areas and so, my role is to be a teacher and kind of that mentor for them, but really a guide in helping them through the process” (I-6:26).

As “a resource, you know,” Ginny reflected, “I give people options for how they can direct their healing. I’m a consultant, I’m giving you information, you get to choose” (I-7:52, 53, 54, 55). Tilia’s role was to give options and suggestions, “…to make my skills available… I am here as a collaborator with my clients” (I-12:65, 68) and “…meet folks where they are, to let them know for sure that they’re not supposed to be perfect” (I-12:54) to see people “…as individuals” (I-12:128). Sal described herself as “very flexible” (I-13:79) and Rose believed it was important to be non-judgmental, to “…be present with a client and give them full attention without judgment” (I-3:35). Later, Rose distilled the essence of her thoughts. “A lot…comes down to love and compassion for people” (I-3:91).

Applying a client-centered approach requires maintaining the person’s goals and intentions as a priority and partnering with them to create concordance. The application of a
client-centered approach in herbal medicine is requisite for *Weaving a Tapestry of Right Relationships*.

**Property: Client commitment.** Client commitment is the second methodological strategy for accomplishing *Exploring the Personal Composition*. The dimensions of client commitment, as listed in table 13, include client autonomy and participation. Participants defined client autonomy as self-determination and making their own decisions.

<table>
<thead>
<tr>
<th>TABLE 13. Property: Client Commitment</th>
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<tbody>
<tr>
<td>• Autonomy</td>
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<tr>
<td>• Participation</td>
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Marsha talked about client commitment when she said the whole consultation “depends on the level of commitment I feel from them, what their intention is. And a lot of times, I will think how much they feel like responding, again, to that level of commitment will determine a lot” (I-5:18). Clients who are in control of their health exercise autonomy. Melissa’s “… goal is for the person that is seeking my services, to be in control of their health and be as educated in that health as much as they can” (I-10:76). She believes her clients “…certainly can make their own choices… that’s totally up to them and I will follow what they want to do” (I-10:46. 105). Likewise, Tilia believes her clients know themselves best and, therefore, they are the ones making decisions. “You're the one who directs this, you are the only person who has ever lived inside your body, so I don't know” (I-12:67).

**Property: Knowledge, experience and skills.** The knowledge, experience, and application of skills used for *Exploring the Personal Composition* enable the herbalists to gather the necessary information for *Weaving a Tapestry of Right Relationships*. Dimensions of knowledge, experience, and application of skills include knowledge of assessment, using inquiry
during the personal consultation and with pre-consultation questionnaires, observation and examination with inspection, auscultation, and palpation to complete physical or clinical examinations. Necessary skills to perform the assessments and communicate with clients enable *Exploring the Personal Composition* (see Table 14). Patterns of thinking and critical thinking are discussed in subsequent steps.

**TABLE 14. Property: Knowledge, Experience and Skills**

- Assessment: Inquiry (interview, questionnaire), Observation, Examination: inspection, palpation, auscultation, tongue, and pulse
- Communication
- Different patterns of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential, and traditional
- Critical thinking-problem-solving, assimilating and synthesizing information, evaluating, sorting, differentiating, and prioritizing

Participants talked about using inquiry in the encounter and with extensive pre-consultation questionnaires. Cammie uses an intake form along with the office consultation to gather information. “There’s an intake form that they fill out and just kind of a history, kind of all the normal stuff that you would use in family practice. And then I sit down and we talk…” (I-6:2). Like Cammie, Melissa sends out a questionnaire. “They’ll fill out that intake form prior to my first visit” (I-10:1), while Sal said she does a review of systems in the office. “I ask a lot of questions, sometimes I’ll ask for a food diary, I ask about bowel habits, urination, risks, and then basically go throughout. They talk, I ask questions. I go through system by system” (I-11:12).

Observations of the client are utilized to gather information and extend beyond the inspection of a physical exam. Melissa considered observation as a way to obtain direct nonverbal information when she said, “I may get some information directly from them that’s not verbal that I see what’s going on in their body” (I-10:17). Sal said she,

“…look[s] at their vitality, I’m looking at their eyes, their hair, their skin, I’m listening to their voice and watching to see if they’re reflecting, if there’s any joy
in them…do they laugh? Are they clean? Do they stink? Are they nourished? Are they pale or are they gray…” (I-11:7).

Observations are described by Herb to be observations of the physical presence and mannerism as well as emotional tones evidenced in behaviors.

“Observations are not necessarily limited to the physical exam and history…the way the person dresses, the direction they enter, their overall atmosphere they carry with them…What are they doing with their hands? Are they fidgeting…are they flat responders? What are the emotional tones that are arising? The tone of voice, you know, is it a groan? Is it up and down and melodic? Is it sharp? Those kinds of things, organize the data that way. It also depends on whether I know the person or not, but if I already know the person, then I have a history upon which to base the observation” (I-2:31-37).

Examinations conducted by participants to gather information on the person include pulse, tongue and skin inspection, and/or palpation. Herb described the pulse examination he performs.

“I’ll collect pulse data… I’ll do an extended pulse diagnosis record and take maybe 20 minutes to record in detail all of the phenomena of the pulse and also look at the tongue… I need to feel their pulse as they come into contact with various themes in their life and that starts to build for me, an unconscious trend at the level of the heart for me to understand what’s taking place” (I-2:5, 18, 54).

Marsha related her physical examination of the pulse, tongue, and skin to evaluation of the constitution of the person.

“You look at’em, you look at their tongue, is the tongue dry, is it wet? Constipation is a sign of dryness, get a whole symptom picture of, you know, dry skin, dry hair, dry digestion…learning how to assess constitution, you know, are they edematous, are they wet? Do they have a scalloped tongue? You know during the physical assessment, will tell you what they have and differentiate the constitution” (I-5:24, 25).

Likewise, examinations may include compete or focused physical exams. Cammie did either focused or complete physical exams. “Like blood pressure, I will definitely do that… But it’s usually system specific, so that could include, I mean, anything from head to toe” (I-6:40, 41).
Summary Step One

Personalizing herbal medicine starts with *Weaving a Tapestry of Right Relationships* explained by *Exploring the Personal Composition*. The properties of *Exploring the Personal Composition* are gathering information on the whole person context, the personal health landscape, and personal energetic patterns. The holistic assessment of the person is actualized within the therapeutic relationship with client commitment and a client-centered approach. Assessment is accomplished with knowledge of assessment and application of assessment and communication skills. Using the words of the participants, this section has illustrated the depth and dimensions of these properties.

Step Two: Interpreting Dissonance in the Personal Composition

*Interpreting Dissonance in the Personal Composition* is the second step in the process of PWHM. Dissonance in the personal composition creates movement towards resolution. *Interpreting Dissonance in the Personal Composition* is comprised of substantive and methodological properties. The substantive properties signify the focus of the step and the methodological properties refer to how the step is accomplished.

Interpretation is the process of identifying the dissonance. Interpretation takes place at multiple levels including the level of symptoms, causation or modes of activity, ground conditions that feed or nurture the cause, and energetics. The intention of interpretation is to name the dissonance. *Weaving a Tapestry of Right Relationships* is sorting through the information and looking at relationships and patterns. The herbalist differentiates the symptoms or presentation from the underlying cause. This results in the development of a theory of causation and naming or defining what is going on with the client. Interpretation is relative to
Exploring the Personal Composition and drives Creating Concordance in Tailoring Herbal Medicine.

The focus of Interpreting Dissonance in the Personal Composition is the identification of the symptom variations, person and disease energetics, root causes and supporting ground of the dissonance, and naming the dissonance. This is accomplished with knowledge and the application of skills within the therapeutic relationship. The following discussion, along with examples from participant interviews, illustrates the dimensions of interpretations of dissonance necessary to move toward resolution.

**Property: Identifying the dissonance.** The dimensions in table 15 describe the property identifying the dissonance. Dimensions include symptom variations, the energetic patterns, the root or center of the dissonance, and what is supporting that dissonance in the person as well as theory of causation.

<table>
<thead>
<tr>
<th>TABLE 15. Property: Identifying the Dissonance</th>
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<tbody>
<tr>
<td>- Dissonance-patterns, energetic profile (tissue states), symptom variations with modes of presentation</td>
</tr>
<tr>
<td>- Root and ground contours-supporting structures</td>
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<tr>
<td>- Theory of causation: physiology, psycho-emotional-spiritual modes of activity, energetics/constitution,</td>
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Identifying the dissonance is sorting the information, looking at patterns and putting the parts together to develop a theory of causation along with the supporting mechanisms or structures amenable to herbal treatment. Herb described this when he said,

“…taking all the signs and symptoms and chunking them down into, well, let’s call’em energetic components. I don’t like the word, but, anyway, we’re organizing all the medical data into resonant fields. And then looking at and converting those resonant fields into some form of medical point of view and taking that set of information and looking at how they all affect each other in a flow chart …the formula’s in my head, so I just write that down and suspend belief and go for, and actually try to disprove that idea. So much of my process is, when I’m dealing with herbs, is to rule out as efficiently as possible, anything I might be considering. And that’s the quickest route to clinical conclusions is that
kind of Western scientific positivist kind of view upon the problem, which is to attempt to disprove the theory. And so I see the working diagnosis as a hypothesis, which I am attempting to disprove” (I-2: 91,92,93,14).

Herb added that getting to the root involves “…looking underneath for what is the, where is the confluence of the conditions that are taking place, where is the center? That’s what we have to treat” (I-2:121). Rose said it her way with, “Really looking at the root of it, you know, when did this start and what’s at the root of it? And why is this pattern here?” (I-3:28).

The cause or root of the dissonance and supporting networks may be external to the person, pathophysiological, psychological, or energetic modes of activity. Participants talked about causation consistently as being the primary focus herbal medicine is designed around. Ashwa reported that he will “try to angle herbal treatment to support them and feeling like I’m making changes in the root causes, in other words, emotions” (I-8:5). The cause can also be considered an irritant that needs attention. “First, one has to identify what is an irritant. First, we have to identify those and then work to eliminate them from that person’s life, inasmuch as one can, and then add nutrients” (I-8:15, 16). Rose looks at the physical “body as a metaphor” because she believes that whatever dissonance is occurring manifests at multiple levels within the person. “On so many levels, it’s the same pattern happening…this is what the body is doing. Is that reflected elsewhere in this person?” (I-3:24). Likewise, physiologic causation may mean differentiation at multiple levels or systems, from the ground level to the level of symptoms. Ashwa gave the example of a food allergy to describe the causative levels he would address when formulating.

“My primary focus would be on the GI tract, you know, on the epithelial tissue and the GI tract. However, given the nature of that condition, the liver is gonna get a whole lot of abuse… so, understanding that relationship physiologically, then, I would say, ‘Okay, what can I do to facilitate phase one, especially phase two… maybe hepatic protective herbs would be appropriate, or maybe circulatory
stimulants where the liver, certainly along with nutrients, perhaps gentle liver stimulants,’ …you know I’m like, you’re looking more at that person’s specifics on how their symptoms manifest… and looking at details of their symptom picture” (I-8:45).

Causation may be an energetic imbalance. Ashwa described energetic imbalances as involving multiple systems as a way to compensate for the chronicity of disease.

“In order for the body to try to manage a chronic condition, it’s typically drawing on energies for nutritive resources from other parts of the body. So the body in a chronic condition tends to draw on resources, blood, nutrients, energy from multiple other systems. And so I want to support, I want to look at what are the other systems involved…” (I-8:79-80).

For Ellie, causation always expresses in the energetic. “But yeah, so for me the disease will always reflect an energetic pattern of dysfunction...” (I-15:44). The interpretation of dissonance, for Tilia, is “what is this individual’s basic imbalance?” (I-12:8).

Participants, with extensive detailing, differentiated symptom variations and presentations. This was to get an understanding of the individual’s unique experience in order to discover a pattern that points to a cause. A hypothesis of causation allows movement towards resolution or harmony. Herb used asthma as an example of symptom pattern differentiation. “Or asthma and then there’s the pattern differentiation. So, in Western herbalism you might look at that pattern differentiation” (I-2:25). Tilia believes “a cough is not just a cough…it has a flavor, it has a temperature, it manifests on the ground of that individual” (I-12:26, 27). Flora demonstrated symptom differentiation when she asked, “how is that anxiety manifesting?” (I-1:36).

The intent of symptom differentiation is not to come to the conclusion that there is anxiety that needs treating. Rather, it is working back from anxiety or from the disorder to see how it manifests in this person and whether those symptoms “hit a critical mass…which
aggregate towards a pattern…?” (I-2:15). Are there gastric symptoms? This is followed by more
differentiation. Is it nausea, weight loss, bloating, abdominal wall tension? Likewise, if there are
cardiac symptoms or skin symptoms with the anxiety, the symptom details for the person are
prioritized. The intent of symptom differentiation is to find a pattern and cause and tailor an
herbal medicine that resonates with the whole person mediating dissonance in the process of
creating harmony.

Symptoms are prioritized in order to address the acute situation or comfort first. Sal will
treat symptoms acknowledging that that may be the first consideration but it is not treating the
root of what is going on. “An individual will come to me with this suite of symptoms and I want
to address their symptoms…” (I-11:5). Tilia’s “…first visit is going to result in something that
addresses what is most bothersome right now, and strips back as much as possible to the
underlying infirmity” (I-12:122). Melissa communicated that she will:

“… add some of the herbs for the acute scenario… but I’m looking at what is the
ugly thing that’s rearing it’s head that is at the root of what’s going on, ‘cause we
want to work from …the acute back to the chronic thing that’s going on” (I-
10:97).

“Whatever the thing that’s causing them the most discomfort on a daily level,” says Ginny, “is
getting treated, even as that’s not related to what we see as the big picture” (I-7:105). Tilia
realized that a “…symptom pattern that is recurrent and interfering… might be a constitutional
depletion” (I-12:79) and relates to the center of the problem.

In summary, identifying the dissonance includes sorting through the information gathered
and defining the symptoms, causative, supportive, and energetic variations and patterns.

Property: Naming the root. Naming the root cause, labels the nature of the dissonance.
Naming is assigning a descriptive summative term. The names or terms align with energetic
systems and/or traditional and historical applications of herbal medicine, making the dissonance amenable to herbal treatment. These dimensions are listed in table 16.

**TABLE 16. Property: Naming the Root**

- Naming: Blockage, constriction, stagnation, sluggishness, relaxation, depletion or excess, and loss of connection.
- Amenable to treatment

The property of **Interpreting the Dissonance in the Personal Composition** involves, as Cal said, interpreting and “…understanding conventional diagnostics and applying them to nutritional energetic systems…” (I-4:24). The language of herbal medicine used to name the dissonance incorporates energetic terms like hot, cold, damp, dry, excess, and deficiency. The tissue qualities expressed to name and describe the dissonance are excitation, depression, constriction, relaxation, atrophy, and stagnation. Descriptive terms like depletion, inflammation, congestion, and fracture help define the dissonance. Tilia demonstrated naming with energetic terms. “Depletion is the best word for that” (I-12:42). Flora described disease as deficiency. “They don’t have enough digestive fire and they’re really deficient” (I-1:17). And, Marsha names the root of the dissonance using energetic terms.

“I’ll be looking at, you know, the energetics of what’s in front of me, you know, hot, cold, damp, stagnant, tissue state kind of stuff. And sometimes I’ll treat symptomatically, to get’em out of pain or you know, I don’t mind being superficial, to get’em to a more comfortable place and then really look at what the issue is” (I-5:9).

Naming the root of the dissonance is identifying the cause of the dissonance with a term or name conducive to herbal treatment. Names or terms used are in accordance with patterns of energetic imbalances, traditional indications reflecting the actions and uses of herbal medicine, and differentiation of symptom presentations.
Property: Therapeutic relationship and client commitment. The therapeutic relationship and client commitment enables Interpreting Dissonance in the Personal Composition. Therapeutic relationship and client commitment are consistent with Exploring the Personal Composition and are discussed in the section on Exploring the Personal Composition. The dimensions are listed in Table 17.

TABLE 17. Property: Therapeutic Relationship and Client Commitment

<table>
<thead>
<tr>
<th>Property: Therapeutic relationship</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Partnering with the client, partnering with plants</td>
<td></td>
</tr>
<tr>
<td>• Client-centered approach, purposeful</td>
<td></td>
</tr>
<tr>
<td>• Interactive</td>
<td></td>
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<tr>
<td>• Trust building and nurturing</td>
<td></td>
</tr>
<tr>
<td>• Time involved</td>
<td></td>
</tr>
<tr>
<td>• Practitioner commitment,</td>
<td></td>
</tr>
<tr>
<td>• Practitioner roles-educator, mentor, resource, witness, guide, storyteller, collaborator</td>
<td></td>
</tr>
<tr>
<td>• Practitioner characteristics-nonjudgmental, patience, honesty, flexible, compassionate</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Client commitment</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Autonomy</td>
<td></td>
</tr>
<tr>
<td>• Participation</td>
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</table>

Property: Knowledge, experience, skills and resources. In-depth knowledge and well-developed skills are required to interpret dissonance. The necessary skills and knowledge for Interpreting Dissonance in the Personal Composition include critical thinking abilities, as well as abilities to problem-solve, assimilate, synthesize, evaluate, sort, differentiate, and prioritize information. Patterns of knowing include empiric knowing from formal discipline-bound sciences (knowledge of modern research, biological and human sciences, medical, pharmacology, and herbal medicine), traditional, experiential, and intuitive knowing. Communication skills and tangible resources are also essential skills and resources. Table 18 provides the dimensions of knowledge, experience, application of skills, and resources.
The ability to critically think, assimilate information, and organize information is essential for interpreting dissonance. Tilia said interpreting was accomplished by “sorting out” (I-12:8) information. Sorting out is prioritizing and differentiating client-related information that was gathered in *Exploring the Personal Composition* in order to define what is occurring and set expectations or goals that drive the tailoring process or *Creating Concordance*. As Ashwa said, “I spend a lot of time grouping into causes and factors of the condition” (I-8:4). Likewise, Ashwa believed that experientially-based cognitive skills were necessary for *Interpreting the Dissonance in the Personal Composition* and include the ability to process information gathered from multiple levels in order to interpret the dissonance in the personal composition.

“…observation, awareness, perception and then critical thinking skills. We need to be awake and alert and aware and we need to glean a lot of information on multiple levels and we need to take that and put it through, fire up our critical thinking skills and take all of that raw data…. …critical thinking skills and the awareness that you have to, it happens inside you, you can’t get that out of a book” (I-8:142, 144).

Pepper advocated that interpreting dissonance “…involves a deal of research and investigation, a lot of reading” (I-9:50). Ashwa emphasized a strong background in physiology. “Principles of physiology will drive my choices” (I-8:44). And he stressed the importance of knowing about pharmaceuticals when interpreting dissonance.

“…how quickly or not that pharmaceutical is absorbed through the GI tract and how quickly it makes it to the liver …so if you use your herbs artfully, one can
temper or alter the effect of a pharmaceutical to one’s advantage and there’s times when one has a little latitude to experiment and well, let’s try this” (I:8:122).

Cal talked about the need to investigate pharmaceuticals. “I’ll want more time, ‘cause I’ll need to take the time to go in and investigate every drug they’re taking and, you know, how they’re interacting with each other...” (I-4:33). Tilia reinforced the importance of integrating science with art and tradition in the practice of herbal medicine.

“I am someone who has never seen any clash between science and art and tradition. So, all of these things feed into our knowledge as far as I am concerned...deep study, when I study, I study hard, I never look at the consumer information, I look at the professional information on everything. I look at the clinical studies, I read deeply the traditional works on them, I have an extensive library” (I-12:55, 72).

Like Tilia, Cal sees value in the mix of traditional with empirical knowing. He will “…balance more contemporary evidence-based clinical research with the traditional understandings and indications of the plants” (I-4:34). Ellie also talked about the value of scientific knowing but also the value of a balanced approach. “I love research, I love the science, but at the same time… that can’t rule everything in my practice” (I-10:37).

Haptic knowing refers to knowing through sensation and while haptic and intuitive knowing could also be considered as part of traditional knowing and as emerging from personal experiential knowing, each is considered as separate but interconnected ways of knowing.

Intuition is a deep visceral knowing experienced by the practitioner that emerges from repeat experience and can be used as a skill. Intuition is defined as the seventh sense that is mediated by the sixth or haptic sense. The haptic sense is a somatic sense, an awareness of physical sensation, other than pain, within the body (not seen, heard, smelled, tasted, or touched). Intuition is based in our preconscious, non-rational, and often momentary intake and evaluation.
of reality and our personal connectedness to our environment. Intuition enters awareness as a vague undefined visceral sensation, thus potentially mediated by the haptic sense, that evolves to an ‘aha’ moment of insight. Intuition in herbal medicine is a form of knowing that is acquired with experience coupled with a non-rational awareness. It is acknowledged, valued, and acted on. References to intuition were universal with the participants in this study with variations in descriptions. Herb perceived intuition as a perception, needing verification and follow-up with clinical skills.

“Skills are in place for rigorously checking those intuitive realizations. And… it comes back down to physical examination, ruling it out… Then we have to have a basis for a real intuitive process… I can’t just rely on the intuitive I must approach the problem with some form of rigor and balance. And that’s the mercurial component” (I-2:28, 44, 47).

Pepper acknowledged intuition as a gut feeling. “Your gut, you just know things… it emerges, you know, once you learn to trust it and interpret it” (I-9:53, 54). Melissa also reported experiencing intuition while interpreting client information. “I will get a very strong intuitive sensation” (I-10:64). Ashwa talked about the process of formulating as a non-rational process and later explained his perceptions of intuition.

“Another way to do it is through non-rational means, although some of what I’ve just been talking about happens on an intuitive level…I try to look with all my senses, all seven, we have seven senses. We’ve got the standard five that we all know, okay, and most people call intuition our sixth sense. Intuition is our seventh sense, okay? Intuition is what warns us about things that are generally non-physical. Or it informs us through non-physical means and then there’s one that bridges the two, so our primary five senses are, they inform us about things in the physical world, oftentimes through physical means, when you smell something, there’s molecules of that substance that are goin’ up into our nose and our olfactory bulb in your brain, you know, so we’re actually tasting it and there’s something physical going on there, and same with touch and so the sixth sense, what I’m gonna call the sixth sense is called the haptic sense and that is our sense of what’s going on inside our body. So if you have menstrual cramps or if you have a stomach ache, you’re not smelling them, you’re not tasting them, you’re not touching them, you know, that’s your haptic sense. And so our haptic sense
informs us about physical and physiological things, but it also informs us about non-physical things. When you say, “I have a gut feeling about something,” you’re feeling, there is a feeling in your body, but it’s informing about something non-physical. Your haptic sense is a bridge between the two, between the first five and intuition. I will do my best to open up my own awareness to all those senses” (I-8:48, 54-60).

Interpreting dissonance is a function of skills and available tangible resources and tools like materia medicas, research reports, pharmacopeias, formularies, medical resources, pharmaceutical information, and experts. Herb considered important resources to include “…cognitive models, the pharmacopeia, formulary, the ability to do the appropriate assessments, so all those tools are in place” (I-2:46). He talked about the need for skills to interpret and assimilate information within the interaction.

“…contemplative hermeneutics… here we’re talking about in the context of a clinical interaction… it requires that the practitioner has access to those parts of the mind, and it also requires the practitioner have a very competent grasp on the tools of the trade” (I-2:45).

Summary Step Two

Interpreting Dissonance in the Personal Composition is identifying the dissonance in the information gathered in Exploring the Personal Composition. The focus of interpreting the dissonance is to identify symptom variations, the energetic pattern, the root cause, and supporting structures or mechanisms of the dissonance. Naming the dissonance gives it a form agreeable to herbal medicine. This step is accomplished with knowledge, and the application of skills and resources, including intuition, critical thinking, and knowledge of the sciences within the therapeutic relationship and with client commitment. Available tangible resources enable the interpretation of dissonance. The interpretation of dissonance moves towards resolution of the dissonance, providing the participant the cause and name of the dissonance necessary for Creating Concordance and weaving the right relationships with the person and the herbal
Step Three: Tailoring Herbal Medicine

*Tailoring Herbal medicine* is the decision-making subprocess of PWHM whereby personal herbal medicines are designed and fine-tuned to fit the person, resulting in a cohesive personalized herbal medicine. *Creating Concordance* is the core category of this subprocess and explains how WHM practitioners tailor, fit, or match herbal medicines to the person with chronic disease. *Creating Concordance* is the central focus of *Tailoring Herbal Medicine*, linking all the steps. A medicine concordant or in the right relationship with the person is the outcome.

*Tailoring Herbal Medicine* includes the substantive focus of steps taken to match or tailor the herbal medicine to the whole person. These steps are, *Identifying Treatment Goals, Defining Associated Herbal Actions, Delineating Herbs Matching the Actions, Reducing the Alternatives to Specific Herbs, and Personalized Herbal Medicine*. *Tailoring Herbal Medicine* is accomplished with the skillful use of strategies, the therapeutic relationship, client commitment, knowledge, experience, and the application of skills and resources, including the plants used and mental models of how herbs work together.

**Property: Steps tailoring herbal medicine to whole person.** The dimensions for the focus of the subprocess are listed in table 19. The dimensions will be discussed with the steps of the subprocess. The subprocess of *Tailoring Herbal Medicine* begins with the first step, *Identifying Treatment Goals*.

**TABLE 19. Property: Steps Tailoring Herbal Medicine to Whole Person**

- Setting the intention of the herbal medicine and establishing client goals-directing and prioritizing-primary, secondary
- Assigning herb categories to needed actions and indications-pharmacologic, energetic, tissue states, symptoms
- Identifying herbs from categories to indications or actions (multiplying the alternatives),
- Evaluating the alternatives
- Filtering the alternatives down to possibilities
- Selecting appropriate herbs, tuning
- Concordance, harmony, vibration
To identify the goals is to set the intention of the herbal medicine in relation to the client assessment and interpretation of dissonance. Setting the intention of the herbal medicine is “directing” (I-1:53) and framing the healing purposes of the formula. It includes prioritizing what the most important feature of the formula is. The most important feature of the medicine may relate to what needs addressing first. Flora said for her, “the most important thing is what they’re suffering most distress from” (I-1:44). Likewise, the most important focus of the medicine may be what in the long run needs the most attention or greatest directional stimuli or push from the medicine. Ashwa addressed the importance of knowing what the intention of the formula is.

“All herbs have one of three primary actions, which is stimulate, tonify or relax. And so having an overall sense of where I’m going with this formula, am I trying to stimulate, tonify or relax? And you can’t do all three at once. You need to know where you’re goin’” (I-8:11).

Prior to formulating, the question posed is “What are the actions…what do we need to do?” (I-7:108).

The intention of the herbal medicine results from goals to treat the whole person based on the interpretation of the personal composition. “Two things I do,” said Flora, “the constitution and the specific illness. I put a formula together using those two things” (I-1:26). Ashwa demonstrated his intentions when he spoke about designing medicine for the whole person.

“I really want to address and support multiple systems in the body…I am looking at the client in terms of where their psycho-spiritual challenges are, where they’re split so to speak, where they’re losing energy or struggling with themselves and reflecting on the nature of that and how they may correlate to the spiritual properties, the energetic properties of the herbs and so herbs are used not always for their physiological interactions, but maybe for their energetic actions” (I-8:78, 12).

Cammie referred to discussions with clients in which “we talk about different things we can put into a formula and based on their symptoms and history and what we’re trying to achieve, then
that is the basis for the formulation (I-6:3). Ellie expanded on that when she said “what are the goals based on all of that, after I have made my assessments and then what are the actions that I need from those goals” (I-15:6). Herb believed his interpretation of the problem was directly related to *Creating Concordance*. “In other words, how I think about what the problem is, is the first and most important consideration” (I-2:2).

Herbal medicines are also formulated based on healing intentions. Healing is clearing a path or opening channels for the movement, vibration, and flow of energy. This is enabled with herbal medicine and constitutes creating an environment and supporting or making room for self-healing. “I don’t see herbs as a solution, as an endpoint.” reported Sal, “I see them as part of a process and like hoping to find a path or make a path or clear a path” (I-13:99). Ashwa creates room for self-healing by using herbs within the formulation to relax the person and so promote healing.

“How can I get this person to be in parasympathetic dominance for more hours of the day? Cause their body knows how to heal, it’s just using the opportunity to give them some nutrients…If you can’t achieve more parasympathetic dominance, then it’s hard to heal” (I-8:102, 103, 107).

Sal designs a lattice with herbal formulation with the intent to support the person at multiple levels and “raise the vibration or interrupt a pattern…perhaps to move energy…” (I-11:39, 59).

“I want to build a lattice and use those herbs as a means of enhancing their vitality and addressing the imbalances that they come to me with. And so, I am very much thinking about how their mind and their bodies come together” (I-11:34).

Constructing a formula involves addressing major concerns. Tilia designs herbal medicine around “first the major presenting reasons” which is “very often…cut[ting] the stress first…” then she “addresses what is most bothersome right now, and strips back as much as possible to the underlying infirmity” (I-12:77, 109, 122). Sal looks “…at their primary and secondary
concerns …” (I-13:6). Filip looks first at the “…constitution of the person…who they are, constitutionally, we look at their tissue state…” then she looks at supporting the terrain with “nutritional herbs…” (I-14:6, 9, 26).

_Tailoring Herbal Medicine_ begins with establishing client goals and setting intention for the medicine. While this step is client-centered and dependent on _Interpreting the Personal Composition_, _Creating Concordance_ is the basis for the steps taken and strategies undergirding the subprocess of _Tailoring Herbal Medicine_.

The next three steps of the subprocess involve defining herb categories with the needed actions, then identifying what herbs from those categories are appropriate alternatives followed by reducing the alternatives to specific herbs resulting in the final step, personalized herbal medicine. Undergirding and supporting this process are strategies that mediate and ensure success. This section will present the steps that explain the process of distilling out or eliciting specific herbs resulting in personalized herbal medicine.

Participants in the study gave emphasis to different parts of the process. Often, the focus of the discussions was on strategies enabling the process. When asked how this formulation is taught to students, a clear process emerged. When Ginny described how she teaches herbal medicine students formulation she said,

“We kind of come up with all of the actions and we actually do this big chart on the wall, so we have all the actions that we’ve come up with, and then for each action, everyone in the class suggests two or three herbs in each category that they think would work and then we could argue about it. Why this herb should be there or not be there, does it make sense, why are you putting this here? And then when we have that other stuff on the wall, then it becomes clear that certain herbs keep showing up, over and over and over. And then we can pull out the herbs, that are addressing more of the actions that we’re trying to accomplish and that builds, kind of, the core of the formula” (I-7:109).
When she practices, Ginny will “jot down for myself what I am trying to make happen…and I think about some herbs that might fit in that context” (I-7:2). She then “narrows” the list of herbs down and then “just see[s] how I can fine tune it more” ((I-7, 5). Cal also starts with “…the specific indications of the herbs…for whatever I see is the condition…” (I-4:20). He further clarified by stating he would “…think about how I feel the plant functions…” pharmacologically and energetically (I-4:22, 23).

Ellie matches herb actions to goals. She then looks to plants that fulfill the actions and then reduces to a smaller number of plants with a greater number of actions.

“What are the goals based on all of that, after I have made my assessments and then what are the actions that I need from those goals and then what are the plants that will fulfill those actions and hopefully, there are single plants, a smaller number of plants that will hit a large number of actions, as few as possible is ideal” (I-15:6).

Filip talked about matching herbal actions to primary, secondary, and possibly tertiary goals when she said,

“…based on those other actions matched up to the person and their tissue states. Nobody comes in with just adrenal exhaustion, right? Everybody’s got something else going on. So it’s not just matching up the primary base, but all the secondaries and if you’re really good, and lucky on that particular day, and you can match up some tertiaries” (I-14:47).

Herb provided an example of how he matches herb categories to the treatment goals of the patient and his intentions.

“Let’s say a person has a very tense pulse and it’s level, no matter if they’re telling me… that they don’t have any stress, that they’re okay, I know that they are stressed and I’m going to use, probably, rather than agents which are calming and nerving type agents, I’m probably going to use diaphoretics, because they are pre-vessel dilators and now loosen the junction of the neurovascular circuit. And so that’s one example, if the pulse were deep, and they seemed rather energetic, I would know that actually, in fact, they probably had tendencies toward depression, did not get enough exercise, had lymph loading and problems with a wet ground substance or intercellular matrix, right? So then I would use agents
that would catalyze fluid transformations along with agents, which are diuretic” (I-2:57).

When Ellie selects specific herbs she puts them through a final four-phase filter.

“Does the plant have some sort of mechanism of action on the chemical level that is useful, or appropriate? Next is, does it have energetic qualities that are appropriate, next is, and that’s for the sort of symptoms as well as the constitution, background. Then, lastly would be a specific indications” (I-15:65).

Personalized herb medicine is the immediate outcome from the subprocess of Tailoring Herbal Medicine. The herbal medicine formulated will be a congruent, concise combination of multiple herbs acting as a single medicine with an enhanced effect that will be greater than the additive effect of the single herbs. The goal is to achieve concordance or right relationship between the personalized herbal medicine and the individual. The medicine is fit or tailored to the person to achieve this agreement or concordance. “We have multiple frequencies in the same physical space…” Ashwa explained, “I am looking for concordance…it’s gotta kind of match the frequencies ...in order to have something of an effect” (I-8:66, 65). Likewise, Rose wants her medicine to “…make a nice whole together, you know, make a nice harmony” (I-3:48). Cammie expressed concordance when she talked about using adaptogens in formulations. “…I do like to have a little bit of harmony going on between them and the herb” (I-6:39). Sal said she uses “…plants often to raise the vibration or interrupt a pattern” (I-11:39). Ashwa talked about concordance and said “…in that moment if it’s a good fit, then that client’s body, mind and spirit will be receptive to that, they will be moved by that (I-8:65).

**Property: Strategies.** The first methodological property of Tailoring Herbal Medicine is strategies. Strategies support and mediate the subprocess of tailoring herbal medicine. These strategies can be dimensioned according to the function they fulfill. Participants used strategies
that address the whole person with chronic disease, increase the probability of success of the herb selection, limit the number of herbs in a formula, and integrate and apply the herbal medicine. Strategies were also used to address pharmaceuticals. Table 20 provides the dimensions of strategies.

**TABLE 20. Property: Strategies**

- Treating the whole person with chronic disease
- Increase the probability of success of herb selection
- Limit the number of herbs in formulation
- Integrating and applying the herbal medicine
- Pharmaceuticals

**Dimension: Treating the whole person with chronic disease.** Treating the whole person with chronic disease (see Table 21) include balancing the energetics of the herbs to the energetics of the person, thus differentiating specific herbs based on energetic properties. This dimension also includes using herbs according to traditional indications or characteristics for persons with chronic disease and using herbs to treat the terrain or ground of the dissonance.

**TABLE 21. Dimension: Treating the Whole Person with Chronic Disease**

- Balancing energetics of herbs with energetics of the person
- Herbs for traditional indications-supportive, restorative, nurturing, rebalancing
- Using herbs to treat the terrain, physiologically, energetically

Participants spoke about using herbs energetically to treat the whole person and according to tradition for persons with chronic disease. Ginny would “emphasize the more restorative herbs” (I-7:71) and use them to “…support their nervous system and their immune system.” She would also “…do things seasonally with people” like “…chang[ing] tonics out for the seasons” (I-7:99). Ginny uses tonic formulas to “address the constitutional weaknesses.” (I-7:99). Pepper indicated that she “…wouldn’t propose to treat someone with cancer with herbs,” instead she would “offer support” (I-9:52). Sal agreed with Pepper and for the “long-term” she
would “look for more support” (I-11.79). Tilia also stated this when she said that she treats chronic disease with “…deep, rebalancing, restoration, and nurturing” herb formulas (I-12:43). Ashwa may treat chronic disease by using a formula for the chronic aspects of disease and perhaps a simple formula for the acute aspects. “I might give a formula or something that’s oriented for the chronic aspects of it, but I might also give maybe a simple formula or to keep it simple, a single herb or nutrient for the acute aspects” (I-8:75). When formulating, Ellie asks, “…is the person overall in need of stimulation or sort of relaxation or building or tonifying?” Then she may be “…adding plants that really help push it one way or another in that regard” (I-15:10).

Study participants talked about using particular categories of herbs as a strategy to build formulas for persons with chronic disease. The categories associated with repeated use in chronic disease are adaptogens, nervines, and bitters or digestive herbs. Flora felt stress worsened chronic disease and used nervines to treat it. “Stress…certainly causes exacerbations of chronic disease, so I’ll use nervines with chronically ill people, too, for stress control” (I-1:114). Cal also used nervines along with adaptogens and digestives.

“Dealing with almost every chronic disease, there’s almost always some component to treating the gut involved and that’s probably not unique to me. But it’s pretty traditional in and of itself in that approach. So that might actually be in the lead of nerviness and adaptogens” (I-4:41, 42).

Marsha reported that she rarely built a formula for a person with chronic disease that does not include digestives.

“First, and for me, a lot of times it’s digestion and relaxation. So if somebody’s digestion or nervous system is really stressed or strained, then that’s where I’ll start. And if it’s people working on a chronic issue, obviously, digestion is the foundation, so I really want to make sure that’s in good order. And that they’ll be able to absorb what I’m gonna be giving them. Can they assimilate?...There’s a lot of people who do benefit from digestive bitters, so if I have one category that
Adaptogens were used consistently in formulas for persons with chronic disease. Cammie said, “I love adaptogens...I always try and squeeze in a little bit here and there” (I-6:35). Ashwa used adaptogens with persons with chronic disease to achieve his goal of parasympathetic dominance to allow for greater healing.

“Adaptogens used properly and in the right fit and in the right dose, help people ramp up appropriately into sympathetic dominance in response to a truly, truly stressful situation...It can allow them, quickly and gracefully to shift back into parasympathetics, so we get more efficient shifts from parasympathetic to sympathetic and back to parasympathetic, and parasympathetic is dominant, it’s where most healing happens” (I-8:99, 100).

Strategies to treat the whole person included using herbs for their physiologic and energetic actions. Herbs are used energetically to balance the person’s constitution and for the pharmacological action. Cal talked about this use of herbs when he said,

“They [medicinal plants] also have a wide variety of pharmacological actions...some not well defined in terms of modern pharmacology, but are in terms of empirical action...then trying to tailor, balance formulas in terms of, you know, hot, heat, moisture, you know, cold, sort of dryness” (I-4:9, 7).

For Rose, addressing the physical was tied up in the energetic. “…Addressing the physical, it’s just how I address it, includes paying attention to the energy of those plants I’m using, even if I’m using them in a physical dose” (I-3:58). Marsha’s formulation strategy was to use herbs energetically to balance the person’s constitutional characteristics.

“If they’re cold, I’ll give’em warming bitters, if they’re hot, I’ll give’em straight bitters, so it depends on their energetics...the energetics of the person and the energetics of the herb and kind of working them together as a balance...if I see somebody’s dry and they need to be moistened, then I’ll choose moist herbs, like marshmallow, demulcent, comfrey, things like that” (I-5:22, 23, 28).
Cammie considered addressing the symptoms as part of bringing the person physiologically into better balance. “…to ease the symptoms, to help bring their body into greater balance” (I-6:77). Rose attempts to affect the emotions and spirit with herbs in the same way that she affects the physical.

“Someone who just really clamps down, I want to choose herbs that are going to help kind of soften and open them…on the physical level, you might do something like passion flower which is gonna relax their muscles and so…sometimes if the physical softens, the emotions and spirit will soften a little bit too, or vice-versa” (I-3:27).

Strategies were employed that assure that the medicine addresses the whole person and the chronic disease. These strategies include correlating the energetics of the plants to the energetics of the persons, using herbs according to traditional indications, and using specific herb categories in medicines for persons with chronic disease. Long-term tonic and nutritive formulas, which are balanced energetically to the person, were used with chronic disease along with second formulations or short-term formulations to treat acute episodes of chronic disease. Likewise, herb categories like nervines, adaptogens, digestives, and bitters are consistently referred to in formulations for chronic disease.

**Dimension: Increasing the probability of success.** Four different strategies were identified to strengthen the probability of success of the herbal medicine (see Table 22). These strategies include those that foster “buy in” or a “way in”, trying herbs out prior to formulating with them, modifying the formula for taste, and adapting the delivery form of the medicine for the person’s lifestyle and beliefs.

**TABLE 22. Dimension: Increasing the Probability of Success**

- ‘Buy in’
- Trials
- Taste modification
- Adaptation to lifestyle/beliefs
The first strategy to increase the probability of success of the herbal medicine is fostering “buy in.” Fostering “buy in” or a “way in” is to elicit commitment to and participation in herbal medicine and thereby increase the probability of success of the herbal medicine. Participants spoke of the strategy to get “buy-in” as the initial treatment of the symptoms. If the participant could help the person become more comfortable, the person was more likely to commit to ongoing treatment with herbal medicine. Sal attempts to reduce the client’s symptoms and said that if she “…can alleviate her symptoms or certainly, if she can measure a difference…she would be more willing to work with me” (I-13:8). Ginny would “try to get them to do some buy-in on the possibility that the herbs could help them by taking off some of those rough edges for them” (I-7:79). Likewise, Sal reported that “sometime[s] the way in is really a quick herbal intervention that will affect change, one, two, three but doesn’t get to the core of what’s going on” (I-11:44). Adding to this, Ellie said “I do it through the story” (I-15:68). Ellie uses story, mythology, and metaphor to bring the herbs she is choosing into focus for the client, eliciting their partnering with the plant or ‘buy-in.’

A second strategy to increase the probability of success of the herbal medicine is to elicit client participation in the formulation process. This includes trying different herbs out with clients in the office before they are used in the formulation. Cal likes to “have them…potentially try out some of the of the herbs before I make the formula” (I-4:48) and Ginny “…might give them a couple herbal options of things they can try first” (I-7:89). Ashwa would give one-drop doses to clients and watch the responses. He believed this was a very immediate empiric way of knowing how this person will do with the herb and having “…that client’s body help me in that process…it makes me feel confident, much more confident” (I-8:114).
“…giving that client a one-drop dose of that herb, while they’re in the session, and I can watch them and the body-mind and spirit will respond really quickly and very distinctly if you know what you’re looking for when you hit the mark, when you give’em the right herb and then you give a drop dose, it’s much more [the] energy that the person’s responding to than the chemistry. I might give that client a drop of one herb and then just watch them and see what shifts...Here it’s that person, rather than me using mental and theoretical models with that person’s body, telling me at least in that moment what it wants and oftentimes, I’ll get really valuable energy information back from that client in terms of, okay, I can see that it’s shifting their physical or emotional or mental energy in this particular direction and that helps me then choose… I’m looking for changes in their body language, and when someone’s receptive to anything, to any phenomenon, the body tends to relax the shoulder stock, they tend to get into better alignment, oftentimes their head’s been lowered, the eyes, if the person is weakly bored, they’ll open up a little bit. Energetically, I’ll see the chin come forth, there’s a little bit more sparkle in the eyes, a sense of aliveness and sometimes people’s emotional dynamic will change, so they’ve been complaining about, ‘Oh, you know this is so hard to do and life just sucks,’ you know, and then all the sudden, they’ll start talking about something in a more positive emotional context, or they’ll begin to, they will come sometimes out of their mind, many people dwell in their minds most of the time…so they’ll start taking up more information about their surroundings through their senses. They’ll become aware of smells or of objects in the room that they might not have seen before. Sometimes people smile or they laugh… sometimes people get, things turn for the worst and they suddenly get in a bad mood” (I-8.50, 51, 61).

Tilia also said she

“…will always test. I give the person one drop of each thing, and let them simply tell me about their reaction, this is my friend, this is neutral to me or this and I are antagonists. I would never go against something like that” (I-12:30, 31).

The third strategy to increase the probability of success of the herbal medicine is to make a medicine that is palatable. Formulating a medicine that tastes good and that the person is willing to take increases the probability of success of the herbal medicine. Ashwa acknowledges that this is important, but it is difficult to know how to proceed. “It’s really a bit tricky… then you say, well, what’s missing here? Does it need more salty, sour, pungent, astringent stimulant powers …it’s hard to know exactly what you need, but you know when it’s right” (I-8:52). He places a lot of value on the taste of the medicine.
“When it tastes right, and I taste formulas for that, when I think I’m done making them, I taste them...you can make a formula taste a little bit better, we get better compliance and you can make the best medicine in the world, but if the client doesn’t take it, it doesn’t do a lot of good. So, something in that formula to make it taste a little better…” (I-8: 53, 40).

Likewise, Flora believes taste is important and related to compliance. “…cause if they say that they can’t stand the taste...I know they won’t take it because they just think it tastes really gaggy, …you need to go with something that they’re gonna take” (I-1:91, 92).

A fourth strategy employed to increase the probability of success of the herbal medicine is adapting the form of the medicine so it fits with the client’s lifestyle, basic beliefs about medicine, herb or alcohol sensitivities, and economic resources. For Marsha, her client’s economics were an important consideration. She made treatments “…affordable, cause it can get pretty expensive, so it’s kind of like I’m doing a lot more teas and lifestyle…” (I-5:39). Sage said that for her “…finances… that’s a huge piece...we have a free clinical service…” (I-18:25).

Melissa introduces herbal teas as a least intrusive form of herbal medicine.

“I find out how the person is willing to take a formulation, whether they’re willing to make a tea. If they’re traveling a lot, which some of my clients are on the road constantly, they may not have time to take the tea and may not have any interest in making a tea. So, I always have to provide them a formula that works best for them so that they can have compliance with actually taking it” (I-10:12).

And Ellie will have her clients add herbs to “bone-broth soup” (I-15:27). Ginny addresses client expectations for a tablet or capsule form of medicine. “If someone’s idea of medicine is something that comes in a white bottle with a piece of cotton and a tamper-proof top, I try to provide it for them in that form” (I-7:49). Flora also will adapt the medicine form to assure client compliance even though it may not be as good as an individually formulated medicine. “They’ll use capsules instead of a tincture: some people actually can’t stand the taste of herbs, so I’ll try to…” (I-1:60).
**Dimension: Limiting the number of herbs.** Strategies used to limit the number of herbs in the formula include reduction by differentiation and crossover (see Table 23). The first strategy to conserve the number of herbs in a formulation includes acute differentiation. Participants differentiated between herbs within a category by their characteristics and mapped those characteristics to unique personal variations. This is based on knowledge of the herb and the impressions of the personal composition. Cammie differentiated between herbs by matching herb characteristics to the emotional intensity a person presents, along with using their history of response to taking herbal medicine.

<table>
<thead>
<tr>
<th>TABLE 23. Dimension: Limiting the Number of Herbs</th>
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<tr>
<td>• Reduction</td>
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<tr>
<td>• Crossover</td>
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“*They’re already a little bit anxious and a little bit more high strung or they’re just a really sedate person, I’m probably not going to use something like that. I may use eleuthro just as a more gentle [sic], a little bit more subtle impact on them and so I really look at the personality of the person… Some people come in having already been on herbs in the past and they can tell me what worked and what didn’t work for them; what they liked, what they didn’t like and so that’s taken into consideration*” (I-6:38).

Rose differentiated one herb from another within a category by looking at the potential comfort level a particular herb may provide a person.

“*So many people need liver support, and they have really different energy, burdock has this soft gentle, strong and subtle kind of energy, where something like Oregon grape is much more cold and more direct in a way. So for some people, that Oregon grape isn’t gonna be comfortable, it’s too strong*” (I-3.42).

Cal looks at herb characteristics to differentiate and match them to symptom variations in the person.

“*If a person seems to have low GI prowess and is also in need of a nervine and…there was a specific need for a bitter nervine then, maybe that would indicate to me, I might want to use blue vervain there instead of… milky oat tops*
or I could use a variety of things, considering nervines, cause some are going to be considerably more sedative and some are considerably more anxiolytic, some are gonna be more tonic in effect” (I-4:44).

When Ashwa has “three or four herbs that might be good candidates for primary herb,” he differentiates by reflecting on “the subtle energy or spiritual properties” while looking for clues in what the client may say that might direct him “towards one herb in particular” (I-8:47).

The second strategy for limiting herbs in the formulation is the strategy of crossover. Crossover is selecting herbs that provide the most relevant actions from the least number of plants in an herbal medicine. Sal talked about crossover when she said she chooses “…herbs that have overlapping properties” when she formulates (I-13:8). Cal used crossover and said that, “…if the plants in question… have a multiple effect for that person, that I’m going to see as valuable” (I-4:43). He went on to describe crossover.

“Crossover action means I’m trying to describe the idea of tailoring the formula using a specific plant that will have as many relevant actions to as many relevant organ systems and or tissue states within the given person, as possible” (I-4:10).

**Dimension: Integrating and applying herbal medicine.** Integrating and applying the herbal medicine includes fitting or mixing the herbs together, determining the form of delivery, the number of herbs included in the herbal medicine, and the dose and length of time on the formulation (see Table 24).

### TABLE 24. Dimension: Integrating and Applying Herbal Medicine

- Delivery form
- Mixing herbs
- Number of herbs
- Dose and time

Mixing herbs together in formulation includes combining herbs according to traditional pairing of herbs or fitting herbs together based on herb energetics or chemistry. Marsha mixed her formula using energetics and chemistry.
“It’s energetics, what the properties are, energetics, how well does it mix with other herbs, you know tannins and alkaloids, sometimes precipitate each other out, so understanding how to make a formula and then sometimes just the personality of the different herbs…” (I-5:27).

Ginny described mixing herbs in formulation “like I’m setting up a dinner party and it’s like who’s gonna make for an interesting conversation” (I-7:16). Later she went on to say,

“...And then if I can, I have some herbs like holy basil or nettle or chamomile that seems appropriate for that person, I will usually pull those out and make a tea formula if they’re someone who’s gonna drink a tea, because those are much more water soluble than they are in my opinion, they don’t translate well into tinctures, I don’t ever use chamomile tincture, I don’t ever use nettles tincture. Those are teas.” (I-7:111).

Rose hopes to get harmony in her formulas by combining compatible herbs. “Because they all still have their personalities. So they have to be compatible, either with each other or make a nice whole together…make a nice harmony” (I3:48). Cal mixes herbs by balancing energetic characteristics. “…then trying to tailor, balance formulas in terms of, you know, hot, heat, moisture, you know, cold, sort of dryness (I-4:7). Whereas, St. John teaches his students to rely on traditional pairing or coupling herbs according to how it has been done historically.

As expressed by Cammie, the number of herbs that comprise a formula was strategic in the process of Tailoring Herbal Medicine.

“When I first started, I would try and keep it really, really simple. I would try and use one or two, because my theory was that if something was or wasn’t working and I had all these herbs and I really wouldn’t know what it was, but over time I’m not really sure, I mean I think that’s probably an okay theory, but I’m not really sure that it’s the best theory. Because plants do work synergistically together and now I’d say I’m probably putting anywhere from four or five plants into a formula. I don’t like to dilute it down so much that you’re getting 2% of this and 3% of that plant, you know I want them to be a little more potent in the formula” (I-6:67).

Marsha limits the number of herbs in her formulas because she feels “the fewer the herbs the more significant their attitudes are in the formula” (I-5:33). Ginny concurred with Marsha and
keeps her “…formulas four or five herbs maximum.” She rarely goes over that number because she thinks the formulas are “…too busy, otherwise” (I-7:3). Ashwa usually formulates with “seven to no more than ten herbs” (I-8:77) and for Sal “three to five is most common” (I-11:76). Tilia believes that with over “…eight ingredients, we really want to look carefully at why we are throwing so many things into a core tonic” (I-12:66). Herb used the response and situation of the client to gauge the number of herbs he used in formulation. “I’m gonna use single agents when I think patients are not responding well to too much information and when I need them to be self-prescribing” (I-2:106).

Dosing strategies varied by participants. Most study participants used smaller doses with chronic disease that with acute disease. They started either with low or medium doses and adjusted as needed. Some participants reported always dosing high and some talked about using very small or drop doses for the energetic quality of the herb.

Cal started his medicines with low doses in the event there could be sensitivity to the medicine or break-through adverse reactions. He increased doses over time.

“Start the dosages with people smaller and work up to what I consider to be more, oftentimes what are the full therapeutic doses, so I’ll often start slower in the interests of catching any adverse reactions or you know, a drug interaction or anything in a variety of things early on in the early stages, in a small dose when it still manifests subtly and in that way, try to avoid creating bigger problems” (I-4:54).

Cal also varied his dose and, overall, used smaller doses for chronic disease than for acute disease. “The dosages may also be significantly different, of course, depending on the circumstance, but it would be more likely to, for me anyway, to be using larger doses of herbs in the acute scenario” (I-4:59). Whereas, Marsha has “... always dosed high so it’s like 5 mls CID, and you can’t go out and buy those bottles” (I-5:49). Cammie also reported dosing high but starts
out in a middle range and then will reduce or increase if necessary.

“I’m really a high, high doser, I don’t want to start out really huge and then have complaints about something, so we usually will start out, you know, at a pretty moderate, I would say, dose and just see if sometimes we’ll dose up and sometimes we’ll dose down. And sometimes they come back and they’ve adjusted their dosage themselves” (I-6:70).

Based on her experience, Ginny felt “…you have to become aggressive and take high doses and frequent doses” (I- 7:116). In contrast, Ashwa related “…using herbs in minute doses, more for their energetic signature” (I-8:30) and he talked about herbs having dose-dependent action.

“All those different levels, and then we can emphasize, we can work on one level more than another depending on dosage. So depending on dosage and the medium, we can emphasize the energetic actions and emphasize the nutritive actions, you could use it as a cheap drug in large doses and just emphasize the physiological and the stimulant/irritant kind of actions” (I-8:73).

The participants considered the treatment of chronic disease with personalized herbal medicine to be a long-term process. However, the length of time for anticipated treatment varied. Cammie eloquently said,

“Long-term is something I would say is greater than six months. And actually, I guess there’s like three. I would break it up into three different timeframes, because there’s kind of the acute things you’re going through for maybe just a few weeks, there’s things that you’re going to need to use for at least six to 12 months and then there’s some things you may need to be on for three years. So, I guess I would kind of break it up into these three different broader categories” (I-6:43).

She also discussed time relating to the use of adaptogens. “Same thing with adaptogens, that’s a longer-term use… It will be given over a period of time, that may be for pulsing it on and off for a year” (I-6:45). Flora agreed that “chronic disease usually takes longer” to treat (I-1:110).

Likewise, Rose said “…chronic in the long-term work I do with people is really, it’s looking at that long-term” (I-3:74). Ginny looks at long-term work with chronic disease as seasonally determined herbal support.
“If somebody’s doing good, sort of resolved their major issues, and now we’re just putting out fires as they come up, then I might move them to working more with seasonal tonics, so I might encourage them to do liver detox in the spring and use herbs that are more cardiovascular oriented and anti-inflammatory in the summer and do some lung tonics towards the fall and then kidney and restoratives in the winter, and just kind of rotate through that” (I-7:72).

Thus far, strategies reviewed have been specific to the formulation of herbal medicine and include strategies to treat the whole person with the chronic disease, strategies to increase the probability of success of the herbal medicine, strategies to limit the number of herbs, and strategies to integrate and apply the herbal medicine.

**Dimension: Pharmaceuticals.** Strategies used with pharmaceuticals pertained to how participants coordinated herbal medicines with pharmaceutical medicines (see Table 4.23). Strategies include using the herbal medicine in conjunction with pharmaceuticals to potentiate the drug and thereby modify the dose of the pharmaceutical, to substitute herbal medicine for pharmaceuticals, or to nullify the side effects from the pharmaceutical. Supportive strategies are also used for the person taking pharmaceuticals. Whenever pharmaceuticals were involved, participants spoke of proceeding with caution. Use of pharmaceuticals “…changes the process, for one, I have to be much more careful” (I-4:65). Participants researched and investigated the pharmaceuticals and the potential for interaction with herbal medicines and, if appropriate, would avoid recommending herbal medicine and instead focus on diet and life-style.

**TABLE 25. Dimension: Pharmaceuticals**

| • Potentiation  |
| • Substitution  |
| • Side-effects  |
| • Supportive    |
| • Caution-fewer herbs, investigate |

Ashwa believes that “part of the art is using herb/drug interactions to one’s advantage.” He further clarified by stating “when there is a synergy between a herb and a drug,” he can
“lower that person’s pharmaceutical dosage by adding in this herb” (I-8:121). Flora potentiates drugs with herbal medicines. She uses turmeric to enhance the action of anti-inflammatory drugs for a net reduction in the dose of the drug.

“If somebody’s on prescription anti-inflammatory, adding turmeric to the tincture will help, especially if they need to go up on their medications, because you’re just giving something that just does a similar thing as the drugs, but only in a more gentle way, and that’s not to take care of the problem, they can take that, they don’t have to go on a higher dose of medication” (I-1:85).

Likewise, Cal uses herbs to potentiate antibiotics and licorice to potentiate and potentially wean clients off corticosteroid dependence.

“A younger fellow who has been on chronic corticosteroid therapy for something like since four or five for his asthma… in his early 30s, trying to wean off his prednisone medication, but in a really hyper inflammatory state, so, you know that’s a circumstance in which in working with his physician was trying to lower the dosage down with the corticosteroids as well, while maximizing, lengthening their half life, let’s say, with the good old licorice, of course, so that’s fairly common and also other adrenal tonics… licorice, rehmannia…” (I-4:72).

Even though Cal tends “…to use less herbs when people are especially on [pharmaceuticals], depending on the class of drugs and the variety of them. I’ll tend to use less herbs and focus on diet and lifestyle factors…” (I-4:66). Ginny would teach her clients how to use herbs in order to reduce the overuse of antibiotics.

“The few key things we have to do is keep you from using antibiotics four times a year. So, I need you to go buy these items on this list, have them in the house, if you start [with] swollen glands or whatever, contact me and I’ll walk you through what we can do, a different approach which we can use to support your immune system and the symptoms, and let’s see if we can reduce the antibiotic use” (I-7:91).

She also would substitute herbal formulations for pharmaceuticals in the treatment of the acute symptoms that accompany chronic disease. “All chronic conditions have acute cycles. So it
might be something for sleep, it might be something for headaches… to shift them away from having to use pharmaceuticals to manage acute symptoms” (I-7:95).

Rose focuses her efforts on supporting the person that is on pharmaceuticals.

“Most of the time with the pharmaceuticals, I’m just trying to support the person from the unwanted side effects and hopefully supporting them in a way that they might not have to take them anymore, if it’s something that might be a possibility.” (I-3:80).

Participants talked about the cautionary steps they take when they consult with clients on pharmaceuticals. Cal reported that he takes “…more time, ‘cause I’ll need to take the time to go in and investigate every drug they’re taking and, you know, how they’re interacting with each other” (I-4:33). Marsha agreed with this approach and said she wants to “…know the mechanism of action. There might be interactions, and when they’re on medicines even though I’ve been trained as a physician’s assistant, the right prescriptions for the meds, you know I would err on the side of caution” (I-5:41). As a nurse practitioner, Cammie has experience in prescribing pharmaceuticals but still investigates when prescribing herbs with pharmaceuticals. “I want to do some research, just to make sure there aren’t any interactions. Unless it’s something that I know is obvious, but I would definitely do my homework on that” (I-6:48). Ginny investigates the pharmaceuticals her patients are taking and rather than address the side effects of drugs with herbs, she sends them back to their provider.

“I will sometimes get out the PDR and look up all the medications while the person is there, and very often what they’re coming to see me for is a side-effect of a drug they’re on that nobody has mentioned to them, that that could be a side-effect, and so I’ll send them back to the prescribing physician” (I-7:82).

Ashwa realizes the potential severity “…when someone’s taking a drug to keep them alive.” And that there is potentially “…a fairly narrow parameter…in that case the stakes are too high” and herbs are not recommended (I-8:123).
Strategies for dealing with pharmaceuticals range from potentiating drugs with herbs, substituting herbs for drugs, supporting the person with side effects from the drugs, to avoiding the use of herbs in the presence of pharmaceuticals. Participants’ foremost strategy was to proceed cautiously, investigate the potential for interactions, and modify the application of herbal medicines accordingly.

**Property: Therapeutic relationship and client commitment.** The dimensions of the therapeutic relationship and client commitment were addressed thoroughly in the discussion on step one. The building and nurturing of the therapeutic relationship enables all steps of the process of formulating personal herbal medicine (see Table 26).

<table>
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<th>Property</th>
<th>Dimensions</th>
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| The therapeutic relationship | • Partnering with the client, partnering with plants  
• Client-centered approach, purposeful  
• Interactive  
• Trust building and nurturing  
• Time involved  
• Practitioner commitment,  
• Practitioner roles—educator, mentor, resource, witness, guide, storyteller, collaborator  
• Practitioner characteristics—nonjudgmental, patience, honesty, flexible, compassionate |

| Client commitment | • Autonomy  
• Participation |

**Property: Knowledge, experience and skills.** Knowledge, experience, and the application of skills are requisite for *Tailoring Herbal Medicine*. The dimensions of this property can be seen in table 27. Patterns of knowing relevant to this subprocess are traditional knowing, aesthetic knowing, and personal experiential knowing. Requisite plant knowledge includes knowledge of medicinal herbs from research and scientific knowledge (discussed previously), traditional uses, and story surrounding the use of herbs. Belief in herbs as medicine is also a dimension discussed in this section. Intuition, haptic, and empiric (as science) knowing, critical
thinking, and communication were described previously, but are also considered essential to

*Tailoring Herbal Medicine.*

**TABLE 27. Property: Knowledge, Experience and Skills**

- Different ways of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential (relationship with plants), traditional
- Herbal knowledge: bioregional herbs, natural environments and source of herbs, medicinal parts, research, lore, signature, uses, actions, affinities, indications, energetics, qualities, safety profiles, source of safety profile, interactions, traditions of use
- Belief in herbal medicine
- Communication
- Critical thinking including abilities to problem-solving, assimilate information, sort, differentiate and prioritize
- Tangible resources: modern research, traditional herb resources and systems of herbs, biological and human sciences, medical sciences, pharmacology, materia medica, other practitioners

Extensive knowledge of herbs is requisite for *Tailoring Herbal Medicine*. Cammie summed up what is necessary to know about herbs in order to formulate herbal medicines.

“You have to know about the herbs, you have to know… what their uses are… how they work in the body, all the different uses, how one herb can be synergistic with another to help with whatever they’re coming in for. So there’s a great deal of knowledge that needs to be drawn upon in terms of what the herbs can actually do. There are the energetics of the herbs… are we using the entire herb? What parts of the herbs are we using? Do they have different properties? Do they have different uses or impacts when they’re being formulated, when they’re being made into a tea or a tincture…Are there certain properties of the herbs that become more available or are perhaps more potent if they’re harvested at a certain time? If they’re harvested in a particular cycle of the moon, if they’re harvested in a particular time of day or the evening, before the dew, after the dew dries…Know what you’re using and why you’re using it” (I-6:52, 53, 56, 63).

Melissa added that it was also important to know “the energetics of the herb”, the “affinities” and “channels of the body where they work” along with the compatibility of herbs and how they “enhance the action of herbs” (I-10:58, 59, 60). Rose acknowledged that plants are energetic interacting organisms and stated this when she said, “So, in each of the plants, they have what they do physically, but they have their energy or their personality and they have what they do more on a spirit level” (I-3:44). This was rephrased by Ashwa, “On an energetic level, any given herb is said to have this particular energy and this sort of personality” (I-8:64).
Reflecting on knowledge and intuition, Herb tries “not to look at things so, uh, myopically and try[s] to approach the plant with its full myriad of actions, both in the traditional literature and combined with what’s known in modern pharmacology” (I-4:12). He emphasized that although intuition is a component of the process, “I can’t just rely on the intuitive, I must approach the problem with some form of rigor and balance. And that’s the mercurial component” (I-2:44). But, he believes the “…emergence of a formula in the mind, with no apparent hooks into the reality is a formula… I’m obligated to disprove its usefulness” (I-2:43).

Cal “balance[s] more contemporary evidence-based clinical research with the traditional understandings and indications of the plants” (I-4:34). And Ashwa said that when he compounds herbs and formulates “…an herbal formula, I draw on some traditional models” (I-8:37). Ashwa acknowledged the role intuition plays in formulating as “…another way to do it is through non-rational means.” He also puts formulas together “intelligently” and the “principles of physiology will drive my choices” (I-8:48, 38, 44). Pepper went on to say that tailoring herbal medicine takes a “…combination and of intelligence, intuition, and then, well, the other issue for me with wildcraft.” Likewise, it “involves a deal of research and investigation, a lot of reading” (I-9:49, 50).

Traditional knowing is knowing from traditional ecological knowledge that is generated over time. Traditional knowing is characterized by the social process of sharing knowledge, the perception of a sentient world, interdependence of all life forms, and the capacity to self-heal. While several of the participants displayed herbal educational histories consistent with traditional knowing, traditional knowing was also part of the formulation process. Cal sees value in the mix of tradition with empirical knowing and will “…balance more contemporary evidence-based clinical research with the traditional understandings and indications of the plants” (I-4:34).
Aesthetic knowing refers to knowing through creative expression. With every formula designed there is art or creative expression. The participants referred minimally to formulation as art, yet displayed creative expression innumerable times in the descriptions and explanations given. Marsha talked about *Creating Concordance* and *Weaving a Tapestry of Right Relationships* as art. “…the whole art. It’s the whole specificity and tailoring it to this specific person” (I-5:48). Tilia expressed art in her model for formulating. “I create a formula, almost in the manner that one creates a musical chord…” (I-12:10).

Experience refers to totality of past participation with herbs, herbal medicine, and healthcare. Study participants talked about the value of their experiences and relationships with herbs and herbal medicine. Experience with herbs has formed the participants’ relationships with plants and their beliefs in the healing power of herbal medicine. In PWHM, *Weaving a Tapestry of Right Relationships* is enabled and dimensioned with the herbalists’ relationship with the plants.

Formulating is, according to Cal, “an acquired experiential” skill (I-4:2) and “you learn it with practice” (I-13:103). Sal went on to say “the more I see the more I understand how herbs work” (I-13:48). Marsha credited experience and her relationship with the plants for her knowledge of formulation. When she spoke of formulating she said,

> “Nobody ever really teaches that, it’s just your relationship with the medicines you use. And that takes time and practice in really developing that relationship of what herbs you like to work with and how you like to combine them in the formula” (I-5:27).

Ashwa agreed when he said that fitting formulas to persons is experiential and not learned from a book: “…critical thinking skills and the awareness… it happens inside you, you can’t get that out of a book” (I-8:144). Melissa talked about learning from the plants. “…It doesn’t have to be
when I’m outside, that I get some insights from the plants” (I-10:71). Ginny reported that she would “rarely use plants that I haven’t ever seen,” (I-7:14) and “I experience plants personally, just like I do people, that they have certain qualities that make them really good at some things and maybe not as interested in doing other things” (I-7:15). It was through her experience with plants that she saw that “the plants themselves…they just start to hang together” (I-7:9). So, experience has been a major part of her formulation process, and she said she has “a very energetic or almost spiritual sense of what some plants do” (I-7:12).

Cammie discussed personal experiential knowing and related that plants are living dynamic energetic fields, possessing human-like qualities. “It’s a living plant, you know, it’s an energy field in and of itself. It’s got a whole field and vibration that is there. It’s just like we have with anything, with anything that’s living” (I-6:57). Tilia concurred, “what I harvest here, I process here, is alive. And there's a great difference to its efficacy” (I-12:92). Persons and plants are connected and comprehensively entangled and this relationship is essential for human health and sustenance. This relationship emerges from participants’ diverse experiences with plants and informs and directs participants when Weaving a Tapestry of Right Relationships and Creating Concordance. Through our relationships with plants, we express our humanity. Ellie said our belief in plants emerges from our relationship with plants.

“Our belief in the fact that it will work and I believe that that comes from our direct relationship with the plants, you know, if we know a plant well, because we’ve used it, we grew it, we harvested it, we’ve made medicine from it, then we will have a belief, an understanding, not just because I believe in you, but I understand why you’ll work, I’ve seen you work, I understand what you’re about, what your capacity is, the range of activity, so I know that this will happen” (I-15:21).

Later, Ellie talked about plants as “…calling us back to being human” (I-15:58) and her relationships with plants as personal.
“I have real long-term relationships with the plants as many of us do and I really feel, I get these, I have a sense of the personality of the plant, to me. It’s not like the truth for everyone, but there is a certain level of both just my feeling of the plant’s just sort of overall quality” (I-15:15).

Cammie expressed the need to respect plants and to approach herbal medicine from a personal experiential knowing, in contrast to fear.

“Respect the plants, just like anything, they need to be respected… respect what they can do for us, you know if you’re harvesting, ask if it’s okay to be picked. If it says no, then don’t pick it. Try some things out on yourself and see what the plant does to you, or for you, or how does it taste? Don’t be afraid to experiment with a little bit of it, too” (I-6:63, 64, 66).

Experience is necessary for Tailoring Herbal Medicine and Creating Concordance. Experience includes an experiential knowing of herbal medicines, relationships with plants that develop from interacting with plants in different ways, and a confidence and trust in the healing capacities of plants.

**Property: Resources.** Resources for Tailoring Herbal Medicine refer to tangible resources discussed in step two of PWHM and include reports of research, resources pertaining to herbal medicine traditions, and herbal materia medicas. Other resources are mental models of how herbs are combined in formulation and plants (Table 28). Available and bioregional plants were discussed and dimensioned as resources to Tailoring Herbal Medicine.

**TABLE 28. Property: Resources**

- Available herbs
- Tangible resources
- Bioregional or local, conservation
- Mental models:
  - Chord: ground, middle, high notes with minors and grace notes
  - Primary + secondary + synergist
  - Primary herb for problem + second herb for constitution + third herb to direct or push + fourth for synergy + tipping herb
  - Chief + augmenter + supportive + conductive + corrigent or harmonizer
Participants talked about the plants they accessed for their medicine as being important. The herbs in the herbalists’ apothecaries or available raw plant material limited formulations. “Practitioners will have certain herbs that they will use often in their apothecary” (I-10:55) and will have their “favorite herbs” (I-5:30). Bioregional herbs and conservation were important for Marsha. She discussed making adjustments in the herbs she used in formulations based on what was available from the bioregion and not endangered. She was “not using slippery elm and using marshmallow instead, not using goldenseal…” Plant conservation was “becoming primary” (I-5:31). She continued with,

“I started out way back when, very bioregional and then I went and met all kinds of foreign and exotic and fabulous plants, and now I’m sort of swinging back to what’s local, what we can grow…just really trying to return back home to whatever a majority of plants we can grow, we can harvest for our apothecary. So it’s we grow’em, it’s ecology, environmental concerns, and just what my relationship is with each plant is” (I-5:31).

Cammie did not grow her own herbs but agreed with using bioregional herbs to the extent possible. “Those herbs are grown locally, obviously, again there’s some that they can’t, and so they’ll get them from other sources. So I try, you know, most of the herbs, I would say are probably pretty local that we’re using” (I-6:34). Sal offered gardening space to her clients and tried to use local plants in her medicines as much as possible. She used local plants not so much for conservation, but she believed people responded differently to plants they lived around. “I try and utilize herbs from our zone, I believe that there is a different energy in herbs that are grown locally, I believe our bodies respond to those differently” (I-11:1-2). Tilia also believed the herbs she harvested were more effective as medicine. “What I harvest here, I process here is alive. And there's a great difference to its efficacy” (I-12:92). Filip said she would “…primarily work with herbs we can grow” (I-13:37).
Participants described using mental models of formulation as resources. A mental model is a preconceived guide or cognitive template structuring how herbs go together in a formulation. Mental models are theoretical designs for herbal medicine originating in herbal education or experience. The models expressed by participants included formulation templates consisting of three, four, and five herb functions. Various individual herbs may fill each function. Models provide descriptions of the functions or roles herbs play in relationship to the other herbs in the model.

Study participants discussed four different models of herbal medicine designs. The first model, presented by Tilia, was a model of a musical cord. The second is a simple model using a primary, helper, and synergistic herb combination where the synergistic herbs enhance the primary herbs by affecting absorption or elimination. The third model employed primary herbs to address the main problem combined with secondary herbs to balance the constitution and tissue states. Then, herbs were added to address secondary concerns and direct the formula along with herbs that synergize and “tip” the formula making it just right. Ashwa described the fourth model as comprised of the chief, augmenting, supporting, conducting, and corrigent or harmonizing herbs.

Tilia eloquently portrayed her model for formulating herbal medicine.

“…in the manner that one creates a musical chord. So that there is a ground note… the most important, most comforting, most stabilizing element that we are going to use that addresses the deepest underlying dysbiosis. Then, we look at the middle note, in a sense, and this is what is our strongest, most active property…And once something is grounded, something to keep you stable… Where do we need a movement, biologically…this may be that the gut function has been suppressed and we need to move that, it may be that we have developed a lot of damp, stagnant moisture throughout the respiratory system or the lymphatic system, and this needs to be moved, it may be that tissues need to be healed, or astringed, tonified in a sense, sometimes we see that with vascular conditions, whatever that most active property is going to be. That's the middle
note. On top of that, we have the high note in that tonic chord. Where do we want this to go? … from that point on, we can add the minors or the grace notes, the little something extra to spark it, the little something extra to make it smoother and more comfortable, the little something to make it, whatever we need to do, we can temper, we can finesse in those next few things” (I-12:10, 11, 15).

Ellie described a model that is structurally composed of primary herbs, helper herbs, and synergist herbs. She acknowledges that this model influences her but does not constrain her formulation process.

“…plant and the helper plant… the next who kind of carries out some of the mission or takes it to the particular organ system, the envoy, and then you have this synergist whose also moving in or out and so, I get that and it influences me, but to be honest, I don’t sit down with a triangle and think, “What herbs go in these places?” at all, I think that it’s sort of in there, like, what are my primary herbs, what are the helpers and what are…the synergist? Or… I just need a tiny bit of this, it’s gonna help with the absorption of it, it’s gonna push it in terms of affinity to a particular organ, or maybe it’s just again, helping whether it’s absorption or elimination…like pushing it, depending on the kind of formula that might be why I put a little of something in” (I-15:26).

Ellie elaborated on the primary, helper, and synergist herb model with a model that addresses the main concern as the constitution and tissue state, symptoms or causation with the primary herb(s) then adding herbs that “modifies the actions of maybe the primary herb” or addresses the “constitution”. A third function would be for an herb to direct or push the formula, balance it or set a tone to it with a final herb added for synergy. Any other additions would be in small doses “like a tiny little dash of so and so, you know, one ml in a whole bottle of like, okay, it needs licorice or prickly ash or ginger or something like that” (I-15:10. 22). Flora rephrased the intention of this model as treating the constitution, the specific illness, and associated problems.

Ashwa provided a detailed description of the model he referenced when formulating personalized herbal medicines.

“In Western herbology, there’s this idea of five primary herbal categories, in terms of formulation and typically, we have a chief or primary herb… that we
have a specific indication for, that’s really well suited for that primary complaint. And then have system of herbs to **augment or have a similar action** to the primary herb. We have **supportive herbs** that may address other organ systems and facilitate better… function and balance. We have **conductive herbs**, that… oftentimes they’re the circulatory stimulants or… they can be relaxing, they can be antispasmodic… So that by eliminating or reducing overall tension, especially visceral tension, then the other herbs can have more profound effect and we can get that conduction action through several different types of therapeutic actions…circulatory stimulants would be one primary one, relaxing and antispasmodic herbs and then sometimes there are circulatory stimulant or relaxing herbs that have particular tropism… And then the last category in terms of formulations, would be a **corrigent** or sometimes a **harmonizing herb** and these can be herbs that can oftentimes taste good and…then corrigent can also to modify…you know rough edges that the primary or secondary herb might have. So they can help to decrease the potential for irritation or imbalance that the herb might exert… So yeah, corrigent tend to be harmonizing or improve the taste…So, when making a formula… I draw on all of these five categories, although I would say most of the time when it’s something chronic…It’s actually possible to cover all five categories with two herbs if you formulate artfully. So any given herb, because it has three, four, five, six, seven, eight different therapeutic actions, it might cover multiple categories in formulation” (I-8:39-43).

In summary, study participants described four mental models. The models act as a framework or point of reference while formulating. Each model, while having different descriptions, has similarities regarding how to arrange herbs in formulation. The participants acknowledged that while the models were a helpful reference and perhaps checkpoint, the models did not restrict how the participants formulated.

**Summary Step Three**

*Tailoring Herbal Medicine* is a subprocess of PWHM. *Creating Concordance* is a central integrating theme explaining what herbal practitioners do when *Tailoring Herbal Medicine.* Concordance, fit, agreement, or right relationship between the person and the herbal medicine is the immediate outcome of this subprocess. *Tailoring Herbal Medicine* consists of a subprocess of five steps to match the herbal medicine to the person. *Creating Concordance* is enabled with strategies facilitating the step-wise progression, the therapeutic relationship, client commitment,
knowledge, experiences, the application of skills, and resources.

**Step Four: Facilitating Success with Complementary Actions**

*Facilitating Success with Complementary Actions* is the fourth step to PWHM and functions in concert with *Tailoring Herbal Medicine*. *Facilitating Success with Complementary Actions* represents therapeutic interventions, actions, and options that are different than herbal medicines but used in conjunction with them to weave a tapestry of right relationships and facilitate the success of the herbal medicine and the health and harmony of the person. *Facilitating Success with Complementary Actions* is defined with three substantive properties: psychosocial support, educational support, and adjunctive treatments; and three methodological properties: knowledge, experience, and application of skills relative to the complementary actions, therapeutic relationship, and client commitment.

**Property: Psychosocial support.** Psychosocial support is the first substantive property of *Facilitating Success with Complementary Actions*. Psychosocially supportive behaviors are complementary to the herbal medicine and undertaken by the participant to assure the success of the herbal medicines. The substantive dimensions include empowering the person, building strength, trust, listening, and caring (see Table 29). The crossover between this property and the property of therapeutic relationship is acknowledged. The proposed difference is that trust, listening, and perhaps caring are shaped by how they are used and for what purpose. Trust, listening, and caring are both a focus (empowerment) and method (therapeutic relationship) of this step.
Several participants talked about empowering their clients. Education and psychologically supporting clients to help them find their voice and be able to make decisions was considered empowering. Flora used education to empower her clients. “Education’s a big component, because it’s really about empowering the client, giving them back their power so they can heal themselves, get a balance” (I-3:39). Cammie considered being empowered as being heard and self-determining. “… A person who maybe has a lot of pent up anger and needs to find their voice or they need to find their power, they need to come into their own…” (I-6:21).

Supporting clients by fostering self-awareness, self-trust, and personal strengths was a significant part of the complementary actions taken. For Flora, a person’s strengths and building those strengths was part of self-esteem and well-being.

“They realize their strength as they’re talking about it, and they realize what their strengths are, so… they talk about what their strengths are, too, and build on their strengths by encouraging them …that goes a long ways towards doing things, feeling good about yourself and your well-being” (I-1:97).

Marsha said for her, supporting clients “…is really about the client, really helping them with self-awareness” (I-5:14) and for Pepper it was to “…teach them to trust themselves” (I-9:55). Ashwa does “…a lot of just listening to clients, holding hands, giving people tissues when they cry, you know, problem solving on life’s dilemmas” (I-8:131). And Rose described empowering with support and care as the heart of her practice.

“I really think the heart of the practice is that creating that space so they can do their work and handing them back their power so they feel capable of doing their
work…it comes down to love and compassion for people too, I think.” (I-3:91).

**Property: Educational support.** Educational support is the second substantive property of *Facilitating Success with Complementary Actions.* Participants consistently provided educational support with education and information on herbal medicines, self-care, diet, lifestyle factors, nutritional supplements, and conventional medical therapies. These areas of education provide variation to the property educational support (see Table 30).

**TABLE 30. Property: Educational Support**

- Herbal medicines
- Self-care
- Diet
- Life-style-removal of irritants, exercise, meditation, stress relief, appropriate alcohol use
- Conventional medical therapies- appropriate application of diagnostics and pharmaceuticals
- Appropriate nutritional supplement usage

Education included talking to their clients, “working with people’s diets” (I-4:25), “sharing information” (I-3:36), providing written materials, recipes, and instructions. Besides giving her clients recipes, the process for Marsha involves,

“…tons and tons of education, so we have a lot of handouts and a lot of information, and I never tell anybody to do anything except throw away margarine and get rid of rancid oils, and other than that I pretty much meet people where they’re at and I just give them the information, you know, as far as how their diet’s affecting them, certain choices are affecting them and it’s their choice of how far they want to go… really working with them to evaluate how their life and choices are affecting their health” (I-5:11).

Ginny talked about educating her clients to promote the success of the herbal medicines.

“If you’re not eliminating regularly, you’re not sleeping enough, you’re not doing some kind of physical activity, you don’t have some meaning or purpose in your life and you’re not eating a nutritious diet, without those five things, it’s like you’re a bucket with a hole in it. So if I give you herbs, they’re gonna just kind of leak out” (I-7:84).

Ashwa educated his clients to “honor their body more” (I-8:129) because he felt,

“People need to be able to understand the language of the body, they need to feel
that they can interpret symptoms and the body’s giving them messages and so I want them to learn the language of their body, so that they can make appropriate choices in their diet and in their lifestyle that will facilitate healing” (I-8:127).

Along with offering her clients gardening space, Sal would conduct “…cooking workshops…lend books” teach them about the herbs and give clients “…a review of their medications” (I-11:46, 4831). Sal also offered new perspectives.

“Like some people… don’t know that there’s another story about cholesterol, they just know there’s a statin and they don’t like the side effect. Or they have only recently heard of the risk, so they’ve never heard the other side of the story” (I-11:47).

**Property: Adjunctive treatments.** Adjunctive treatment is the third substantive property of *Facilitating Success with Complementary Actions*. For the participants in this study, adjunctive treatments included referrals, recommendations for nutritional supplements, and gardening (see Table 31).

<table>
<thead>
<tr>
<th>TABLE 31. <strong>Property: Adjunctive Treatments</strong></th>
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</thead>
<tbody>
<tr>
<td>• Referrals to conventional practitioners</td>
</tr>
<tr>
<td>• Referrals to CAM practitioners: bodywork, massage, acupuncture, nutrition</td>
</tr>
<tr>
<td>• Nutritional supplements</td>
</tr>
<tr>
<td>• Gardening</td>
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</table>

Along with psychosocial and educational support, the participants of this study referred their clients, when appropriate, to conventional practitioners and CAM practitioners to facilitate the success of the herbal medicine and the wellbeing of the client. Marsha and Cammie both talked about often referring their clients to “…other practitioners” (I-6:22). Ginny talked about having a “…referral network of people who are various types of practitioners” (I-7:24) and reported using acupuncture in cases where a more energetic approach is needed.

“They’re just not able to detoxify anything, their phase two liver detoxification is almost nonexistent, so, they react to nettles…sometimes I find that acupuncture, since it’s bypassing the liver and the digestive system, can move things along enough to the point where they can tolerate some herbs. Because it’s just a much
more energetic approach” (I-7:119,120).

Ashwa thought that bodywork complemented herbal medicine, so he often referred for massage, chiropractic, or energetic bodywork.

“Herbs work best in concert with some sort of manual therapy. So massage or some kind of bodywork, maybe good chiropractic, maybe involving yoga, whatever it might be and some sort of energetic modality and that should be, that could be acupuncture, cranial-sacral therapy…” (I-8:29).

Referrals were also made to conventional practitioners, frequently to the primary care provider. Melissa said “if there are situations where it needs to be monitored, I will encourage the client to talk to them, and I’ll give them information about the herbs they can give to their physician” (I-10:87).

While Tilia gave her clients “recommendations for large supportive doses of EFAs, especially Omega-3” (I-12:53), Ginny “…put almost everybody on some kind of probiotics and fish oil or essential fatty acids” (I-7:38). Sal offered her clients gardening space. “We have seven and a half acres, so, we offer gardening space to anyone who would like it. We offer space, and the tools and if you would like to come and learn how to garden…” (I-11:49).

**Property: Therapeutic relationship and client commitment.** Therapeutic relationship and client commitment are the first two methodological properties delineating how *Facilitating Success with Complementary Actions* is accomplished. Therapeutic relationship is a time-involved partnership wherein the herbalist and client interact, build trust, and work together. The dimensions of therapeutic relationship include interaction, client centered approach, partnering with the client, time-involvement, direction or purpose, practitioner roles and characteristics, and trust. Client commitment includes the dimensions of autonomy and participation (see Table 32).
TABLE 32. Property: Therapeutic Relationship and Client Commitment

<table>
<thead>
<tr>
<th>Property</th>
<th>Dimensions</th>
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<tbody>
<tr>
<td>The therapeutic relationship</td>
<td>• Partnering with the client, partnering with plants</td>
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<tr>
<td></td>
<td>• Client-centered approach, purposeful</td>
</tr>
<tr>
<td></td>
<td>• Interactive</td>
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<td></td>
<td>• Trust building and nurturing</td>
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<td></td>
<td>• Time involved</td>
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<tr>
<td></td>
<td>• Practitioner commitment,</td>
</tr>
<tr>
<td></td>
<td>• Practitioner roles-educator, mentor, resource, witness, guide, collaborator, storyteller</td>
</tr>
<tr>
<td></td>
<td>• Practitioner characteristics-nonjudgmental, patience, honesty, flexible,</td>
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<tr>
<td></td>
<td>compassionate</td>
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<tr>
<td>Client commitment</td>
<td>• Autonomy</td>
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<td></td>
<td>• Participation</td>
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The roles relevant to Facilitating Success with Complementary Actions are those of educator, guide, mentor, resource, and storyteller. Pertinent characteristics include openness and being nonjudgmental, supportive, and flexible. These dimensions were addressed in previous sections. The therapeutic relationship including the characteristics and roles of the participants and client commitment are properties of this step as discussed in the section on Exploring the Personal Composition.

**Property: Knowledge, experience and skills.** Skills and knowledge relative to Facilitating Success with Complementary Actions include the requisite knowledge and communication skills to provide psychosocial support, educational support, and adjunctive treatments. These skills include the psychosocial skills of empowering with knowledge of change, building strength and self-confidence and trust. Knowledge of nutrition, healthy lifestyle recommendations, conventional healthcare and pharmaceuticals, available CAM therapies, and nutritional supplementation is requisite for Facilitating Success with Complementary Actions (see Table 33).
TABLE 33. Property: Knowledge, Experience and Skills

- Different ways of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential, traditional
- Communication
- Requisite skills and knowledge for complementary actions-nutrition, healthy lifestyle, CAM therapies, conventional medical and pharmaceutical therapies, nutritional supplements

Summary Step Four

Step four represents the application of complementary actions to the herbal medicines that facilitate success of the herbal medicine and wellbeing of the client. All the participants discussed using supportive measure to facilitate success. These supportive measures included psychosocial support, educational support, and adjunctive treatments. They were enabled by the therapeutic relationship and commitment of the client.

Step Five: Evaluating Outcomes

Evaluating Outcomes is the final step of the process of PWHM. Evaluating Outcomes is the determination of value or significance of the personalized herbal medicine and the complementary actions through the assessment of concordance as evidenced by the responses of the client. Evaluating Outcomes is defined by three substantive properties: herbal medicine fit, herbal medicine fit plus personal shift, and restoration of dynamic equilibrium. The three methodological properties necessary to accomplish Evaluating Outcomes are the therapeutic relationship, client commitment, and knowledge and skill relevant to evaluating outcome.

Property: Herbal medicine fit. Herbal medicine fit is the immediate and ongoing indicator of compatibility of the herbal medicine with the person. Dimensions explaining herbal medicine fit include client response, life-style congruence, practitioner knowing, and adaptations (see Table 34). While there is overlap between evaluation of fit and strategies to increase the probability of success of the herbal medicine, the proposed difference is the timing of the action
within the encounter and potentially the ongoing back and forth nature of evaluation of fit. In reality, the step of evaluation of fit may instead be an ongoing process or strategy starting during the time the herbal medicine is being tailored to the person and extending for as long as the person takes herbal medicine and interacts with the practitioner.

**TABLE 34. Property: Herbal Medicine Fit**

- Client response/toleration/receptivity/sensitivity/taste
- Lifestyle congruence
- Practitioner knowing
- Adaptations as dynamics change or if herbal medicine does not fit

Fit may be addressed in the initial encounter when the person is first consulted or in an immediate follow-up, but the initial fit is determined before a change from the herbal medicine is expected. Sal explained that she likes to do a quick check 7-10 days after the initial formulation.

“I ask to see them again in seven to ten days. I want to see with my eyes, how they are. Do they present in the same way? I want to find out their experience of herbs, I want to make sure they’re doing themselves well, that they have no questions…do I need to change dosing?” (I-11:70, 71, 72, 75).

Cammie evaluates early for sensitivity and the potential for a dose change.

“Some people are just really sensitive to things and they respond very quickly to very little. And other people will respond very quickly to a lot, or they don’t respond very quickly, so you need to keep upping the dose for them” (I-6:68).

Ashwa gives the herbs he hopes to incorporate into the formulation to the person while they are in the consultation to see if they respond and how receptive they are. “If it’s a good fit, then that client’s body, mind and spirit will be receptive to that, they will be moved by that, and sometimes you run into some issues, and it’s just not the right frequency” (I-8:65). Cal also tries out herbs to evaluate immediate response before sending the person home with them in a formula. “I do like to have them try it out and potentially try out some of the herbs before I make the formula too” (I-4:48). Taste can be a variable impacting how well the medicine fits the
person. Pepper described clients who were repulsed by the taste “Oh my God, the taste is just so horrible, I just hate to take the stuff” (I-9:36), and so she modifies the formula for taste. In these situations, Ashwa asks,

“Does it need more salty, sour, pungent, stringent stimulant powers and you know, you add a little bit of something in there and you take it, and you know, it’s hard to know exactly what you need, but you know when it’s right” (I-8:52).

Herb considered the ‘aha’ moment he feels while formulating as the first indication of a medicine with a good fit. “Does it feel right? Or do I feel confused and muddled… Where am I in this sense of the patient and the sense of the formula and this idea of confidence that I have that it will work?” (I-2:89). And the concept of fit and lack of fit was paired with modification. “If you need to change it a little bit, tweak it a little bit here and there, that’s easy to do” (I-1:33).

**Property: Herbal medicine fit and personal shift.** Evaluation of herbal medicine fit continues over time, merging with the evaluation of personal shift. The property of medicinal fit plus personal shift adds a new level to the evaluation process. The dimensions of fit plus shift are modification of medicine, movement or change, subjective and qualitative, directional and tangible, and time to heal (see Table 35).

**TABLE 35. Property: Herbal Medicine Fit and Personal Shift**

- Movement or change in direction of goals and intentions, disease dynamics/ client dynamics
- Subjective/qualitative/large/subtle
- Directional/symptoms/awareness/ tangible
- Time dependent
- Modifications-adaptations, changing form, dose, medicine

Personal shift is change or movement in the direction of the intentions and goals. Marsha said “it’s just following up what my original intention with that formula is” (I-5:35). Shift may indicate an improvement or worsening, a change in symptoms, person or disease dynamics, a change in wellbeing, harmony a qualitative change or opening, or a change in awareness.
Evaluation of fit and shift with adaptations or modifications of medicine continues as long as the person is on herbal medicine. The medicine evolves with the person as long as needed. Marsha makes “several modifications of formulations over time” (I-5:36) and Rose said, “Anytime I refill [I] always end up changing something. Whether I change part of it, or I change the spirit herbs or something like that, there’s usually some change…” (I-3:77, 78). Sal described the process of adapting the medicines to the person’s change in health. “As the body begins the shift, then we move herbs to shift with the body” (I-13:23). Tilia will “shift that core tonic into something that is going to be more long-term restorative” (I-12:86). Cammie described her process of changing the formula to fit the client as she changed over time when she said, “I cut it back, not to what it originally was, but I cut it back some and she’s been doing great, so, it’s those kinds of things, I’ll, and I always tell people we don’t know exactly what, if this is gonna be the perfect sweet formula for you, I don’t know if I’ve hit the sweet spot, but we can adjust this… So, I do adjust it as needed for people, assuming they contact me and let me know, ‘cause I don’t always follow up with every single person, I don’t call them individually” (I-6:23).

Flora modifies either the herb combination or the proportion.

“Do we need to add more motherwort and take out a little bit of Siberian ginseng or something, how do we need to switch the proportions and that happens a lot, …to work with it because the symptoms kind of come and go and change a little bit. So it’s not a stable kind of thing…” (I-1:81).

Sal described changing the form or delivery of the medicine. “…It’s going to be adapted, maybe the roots, they’re going to put into some bone-broth soup” (I-13:27).

Shift is considered a change in the dynamics of the person being treated with the herbal medicine and/or a change in the dynamics of the disease process. A shift is movement towards balance and wholeness or improved functioning and subjective wellbeing. “You’re trying to make something happen,” Ginny described “you’re trying to wake it up, slow it down, speed it
up, whatever, but you keep using the herbs until you notice something shifts” (I-7:117). Flora described a shift as a change in how the person functions or that they just feel better. “I’m not looking at, considering a cure as with most chronic diseases. I’m looking at shifts, so where they’re just there, where they are able to function and feeling better” (I-1:111). Ashwa described shift as a movement towards balance and wholeness. “I just sense any kind of shift on any of those levels and see whether this is a movement towards balance, towards wholeness” (I-8:63).

Shifts can be subtle and hardly perceptible or large. Ellie said it may just be a “shift in perspective, shift in sort of awareness of how they’re living, so, in such a way that healing becomes a conscious process, becomes a process that people have a responsibility for and need to take accountability for” (I-15:59). Rose talked about shifts being subtle when she said, “…that kind of reflection, and sometimes it’s more subtle in someone, and it’s not unusual that I’ll hear someone say, ‘just an improved sense of wellbeing’” (I-3:54). The “incidence of one of their symptoms is less frequent” she added “… they might not have even realized that until they talk to me, you know, sometimes there’s more subtle lessening or sometimes a symptom will go away altogether” (I-3:51, 52). Marsha said some clients report large changes. “This is amazing, this, you know, it works’, they’re impressed, they’re inspired, it kind of set something off in them. And they’re relieved that there are alternatives to what they understood was the only form of medicine…” (I-5:50). Tilia also noted large changes. People “…call or write me and say ‘you’ve changed my life’” (I-12:60).

Shifts may be qualitative changes or directional tangible changes. Cal discussed the qualitative nature of change. “We’re looking at qualitative effects… But generally it’s a matter of how people feel… some qualitative measures… Either changes in how they feel physically, or how they feel psychologically or emotionally” (I-4:56, 57). Cammie relies on the client’s
subjective report of change. “…patient report. That’s probably number one, so how are you feeling? What are you noticing? What’s changed? What’s shifted since the last time since we saw each other…I would say primarily, it’s more subjective” (I-6:24, 25).

Ashwa felt that “people need to feel tangible improvements,” (I-8:86) and he gauges his modifications of the formula on those improvements. “Am I moving in the right direction?” (I-8:135). Filip believes her clients like to see “measurable difference” but doesn’t feel it is her job to “set the targets” (I-13:60, 61). Melissa likes to “…look at their tongues, ‘cause [sic] that can, you can see changes there pretty quickly” (I-10:24). She also uses a tool to evaluate client change. “When I do the follow-up, I always have them rank what their ailments are on a scale of one to ten, in terms of discomfort or wellness” (I-10:25).

The time it takes to see a personal shift, to change and heal, varies and is individualized. When Tilia sees people for a consultation, she includes a follow-up visit in the cost of the initial consultation. She said she likes “…to see people about a month out” (I-12:85). Sal is prepared to give the patient time on the medicines because, “its something that happens over time” (I-13:21). Ashwa believes that the time it takes to see a change is relative to how long the person has been in a chronic disease pattern. “…some chronic condition that they’ve had for ten or 20 years, turn it around in a number of weeks, maybe a number of months and that’s a tall order. People can only change so quickly…” (I-8:88). Cammie sees three different time frames for treating chronic disease.

“Long-term is something I would say is greater than six months. And actually, I guess there’s like three, I would break it up into three different timeframes, because there’s kind of the acute things you’re going through for maybe just a few weeks, there’s things that you’re going to need to use for at least six to 12 months and then there’s some things you may need to be on for three years. So, I guess I would kind of break it up into these three different broader categories, for instance” (I-6:43).
She also feels timing can be related to the herbs used not just how entrenched the disease process is. “Same thing with adaptogens, that’s a longer-term use than we’re not just going to do that for just two months. It will be given over a period of time, that may be for pulsing it on and off for a year” (I-6:45). Rose prefers to move slowly. “I want to slowly and gently open them up…I want to have a gentle approach with them so that the approach doesn’t mimic the pattern of what they did to get out of balance” (I-3:30).

**Property: Restoration of dynamic equilibrium.** The final substantive property of *Evaluating Outcomes* is restoration of dynamic equilibrium. Dynamic equilibrium is a personal process of righting or moving and balancing energies to mitigate the tendencies towards imbalance. It implies right relationship, movement, and flexibility and realizing the “gifts” and “optimal capacity to live satisfied productive lives” (I-15:74) as integrated persons. The dimensions of dynamic equilibrium include functional flexibility, integration, individual process, open channels and pathways for energy flow, balancing energies, change over time, and herbal medicine alternatives in dynamic equilibrium (change, maintain, episodic usage, and discontinue). See Table 36 for the dimensions of dynamic equilibrium.

**TABLE 36. Property: Restoration of Dynamic Equilibrium**

- Functional flexibility
- Integration
- Individual process
- Clearing a path, opening channels movement or flow of energy
- Change over time
- Balancing energies to mitigate tendency to imbalances
- Herbal medicine alternatives (change, maintain, episodic, discontinue)

Ginny portrayed dynamic equilibrium as a tree.

“What my goal is, which is dynamic equilibrium. They are like a healthy tree, they’re rooted enough that they’re not gonna get knocked around by changes in the weather. They’re gonna be able to just kind of move with whatever the currents of their life are, and to give them tools so that if they do get knocked
around, they have a strategy for how to get back to ground zero again” (I-7:101).

Ashwa considered dynamic equilibrium like balance that occurs by moving energy. “They [herbs] move energy in the body and if moved in the right way, you’re gonna engender balance…” (I-8:68). Tilia said she would “… want the organism in total, to be as strong, as integrated, as functional as it can be” (I-12:47). She later said dynamic equilibrium is “when that person gets where they want to be” (I-12: 119). Filip also considered the process of dynamic equilibrium to be a personal process and one that is focused on balance.

“This cultural paradigm that we have in this country of, everything polarized and we’re so, when it comes to health, that means you’re either sick or you’re healthy. And to me, in the way I was taught and what I’ve really come to believe and embrace as well, is that it’s about balance and every person’s balance looks different in what they need to support them to move to that balance, is different for each person and changes for each person over time” (I-13:7).

In contrast to this, Filip said that maybe it wasn’t so much about achieving a balance in life but “maybe instead of returning to balance, what I might say is that herbs can have a mitigating effect on our sort of natural tendency toward imbalance” (I-14:56). She elaborated by saying,

“I think that humans are creatures of imbalance, if we weren’t, then, you know, cavemen and tribal peoples would not have had shaman but they did, which means that from our earliest times, we were people of imbalance, that we are people who, given the opportunity, we will go to excess in whatever direction we are inclined to go. Um, so even to say that herbs return [us] to balance, I’m not sure that that’s accurate, because we are not actually creatures of balance” (I-14:55).

Ellie talked about the endpoint in herbal medicine not as a static point but as a process.

“…but it [health] is a process and it’s not a process that one ever necessarily arrives at the end of, so, I think it’s sort of a way of being or interacting, choosing to interact with one’s environment and again, I think this could be done unconsciously as well, but yeah, I feel like it is a process of the sort of choosing to interact with our environment and our own inner lives and our community in such a way that we experience well-being, that we feel fulfilled… that we do… what is in our deep heart to do while we’re here on this planet and that it’s not going to mean that we don’t suffer, it’s not going to mean that we don’t have symptoms
and discomforts, it doesn’t mean that we don’t die. But that even in the presence of the specter of death, at any time, and in the presence of symptoms and discomfort and in the presence of loss and pain, that we still are able to interact with, again, sort of our own inner world, our own inner landscape, our own community and family and our environment and the planet, in a way that feels satisfying and feels that we are able to bring forth our gifts” (I-15:55).

Cammie talked about dynamic equilibrium as open energy movement or flow.

“So, energetically for somebody to always be keeping those channels open to be keeping a clear passage for the whole kind of breathing in and out of the energy to let that flow be very fluid within a person. I believe that’s what keeps us very, that is one of the things that keeps us very healthy” (I-6:19).

While patients take herbal medicines for various time periods, participants talked about not intending to keep people on herbal medicines indefinitely. Cammie would tell her patients she hopes that “you don’t have to stay on this the rest of your life” (I-6:23). She then explained that she questions when and how to stop the herbal medicines.

“How long are we gonna be doing this? And, how do we know when to stop? And some of that is going to be just either weaning or stopping and seeing where the client is at and then going from there” (I-6:75).

**Property: Therapeutic relationship and client commitment.** Evaluation of outcomes is accomplished with the therapeutic relationship and client commitment. The dimensions are listed in Table 37. These methodological properties and dimensions were discussed in preceding sections.

**TABLE 37. Property: Therapeutic Relationship and Client Commitment**

<table>
<thead>
<tr>
<th>Property</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The therapeutic relationship</td>
<td>• Partnering with the client, partnering with plants</td>
</tr>
<tr>
<td></td>
<td>• Client-centered approach, purposeful</td>
</tr>
<tr>
<td></td>
<td>• Interactive</td>
</tr>
<tr>
<td></td>
<td>• Trust building and nurturing</td>
</tr>
<tr>
<td></td>
<td>• Time involved</td>
</tr>
<tr>
<td></td>
<td>• Practitioner commitment,</td>
</tr>
<tr>
<td></td>
<td>• Practitioner roles-educator, mentor, resource, witness, guide, storyteller, collaborator</td>
</tr>
<tr>
<td></td>
<td>• Practitioner characteristics-nonjudgmental, patience, honesty, flexible, compassionate</td>
</tr>
<tr>
<td>Client commitment</td>
<td>• Autonomy</td>
</tr>
<tr>
<td></td>
<td>• Participation</td>
</tr>
</tbody>
</table>
Property: **Knowledge, experience, skills and time.** To evaluate outcomes, participants utilize knowledge and the application of skills related to assessment, interpretation, tailoring herbal medicine, and applying complementary actions. Dimensions of the property knowledge, experience, and the application of skills (see Table 38) unique to accomplishing *Evaluating Outcomes* include tending and evaluation inherent in follow-up.

**TABLE 38. Property: Knowledge, Experience, Skills and Time**

- Different ways of knowing: Intuitive and haptic, aesthetic, empiric as science, personal experiential, traditional
- Communication
- Tangible resources
- Follow-up- requisite skills and knowledge for evaluation
- Tending-garden

For Marsha, following up with her clients takes a lot of work. “I think you need to tend it, you need to follow up, it takes a tremendous amount of energy to do it right” (I-5:51). Herb saw his follow-up time as a way to disprove his hypothesis. “I use the follow-up as a way of also disproving the original hypothesis. What went right, what went wrong, how [do] we refine the formula?” (I-2:88). The use of follow-up was universal with participants and considered an integral part of the process of PWHM and *Weaving a Tapestry of Right Relationships.*

**Summary Step Five**

The final step of *Evaluating Outcomes* is focused on the immediate or short-term determination of the fit of herbal medicine to the person. This continues and merges with evaluation of personal shift in the dynamics of the person or the disease. The long-term outcome in this step is restoration of dynamic equilibrium. *Evaluating Outcomes* is accomplished in follow-up encounters with knowledge, experience, the application of skills, the therapeutic relationship, client commitment, and time to heal. The result of *Evaluating Outcomes* is maintenance of the herbal medicine, modification of the herbal medicine for potentially new
intentions, or the discontinuation of the herbal medicine. Likewise, a need for a change in the formulation may signal a re-entry into the process of personalizing herbal medicine with progression through the steps of the process.

**Summary**

In chapter four, participant profiles and a summary of demographics were presented along with the study findings. The process WHM practitioners engage in while formulating herbal medicines with persons with chronic disease is PWHM. Herbalists personalize herbal medicines by *Weaving a Tapestry of Right Relationships*. *Weaving a Tapestry of Right Relationships* is explained with the steps *Exploring the Personal Composition, Interpreting Dissonance in the Personal Composition, Tailoring Herbal Medicine, Facilitating Success with Complementary Actions*, and *Evaluation of Outcome*. The decision-making subprocess of *Tailoring Herbal Medicine* includes steps, strategies, and resources that result in personal herbal formulas. *Creating Concordance* is the core concept of this subprocess and describes how WHM practitioners tailor herbal medicine. *Creating Concordance* refers to fit or agreement, accordance and consonance, harmony or right relationship between the person experiencing chronic disease and the herbal medicine. The outcomes to PWHM include the fit of the medicine, a change or shift in the client, and the more distal outcome of restoration of dynamic equilibrium. The BSPP was summarized and explained with definitions, properties, and dimensions of the steps with support from participant interviews.

The process of PWHM is contextualized by the social context and structure of whole systems WHM. Aspects of the social structural process of WHM that impact our understanding of the BSPP were treated as mediating and moderating variables to the process of personalizing
herbal medicine. The theory of *Personalizing Herbal Medicine: Weaving a Tapestry of Right Relationships* while unique in scope and depth is grounded in the experience of herbal practitioners and presents the BSPP herbal practitioners use to formulate individual herbal medicine for persons with chronic disease.
CHAPTER FIVE: DISCUSSION AND RECOMMENDATIONS

Introduction

Chapter five centers on a discussion of Personalizing Western Herbal Medicine: Weaving a Tapestry of Right Relationships. This chapter presents the interpretation and integration of this study with Western Herbal Medicine (WHM) literature. Coherence of major concepts in Personalizing Western Herbal Medicine (PWHM) with the conceptual framework used as context for this study will be explored. The process of PWHM will then be evaluated from the perspective of personalized medicine relating to whole systems of medicine. The utility of PWHM will be presented through consideration of the implications for theory, practice, and research. Likewise, future development of this theory, relevance to testing, strengths, and weaknesses, will be discussed.

Interpretation of the Study

PWHM is the basic social psychological process (BSPP) practitioners of WHM use to formulate herbal medicine for patients with chronic disease. Herbal medicines are personalized by Weaving a Tapestry of Right Relationships. Right relationships are woven at multiple dimensions and levels of the whole-person experience supporting emergent coherence and integration (Quinn, 2013). Right relationship expresses the interaction between the parts or elements of whole systems and exists at the level of the person, the process of PWHM, and between the person and the herbal medicine. At the level of the person, right relationship describes the embedded order occurring at multiple dimensions within the person and extending out from the person. Figure 5 shows right relationship at the level of the whole person. Right relationship describes the whole as emergent from interaction of the parts. Right relationship is portrayed with the genetic and biochemical embedded in the cellular, which are embedded in the
tissues and organs, embedded in local and global environments with bidirectional information 
exchanges. The whole person in right relationship is embedded in familial, spiritual, and social 
communities, the eco-environment and the universe.

FIGURE 5. Right Relationship at the Level of the Whole Person

At the level of the process of PWHM, right relationships are woven as a tapestry. The 
steps and substantive properties of the process are like the vertical warp threads in a tapestry and 
the methodological properties weave through each step like the horizontal weft threads. While 
the warp threads support and anchor the weft, over time they will be hidden and what is visible is 
a tapestry of harmony, movement, and pattern of right relationship. Figure 6 depicts right 
relationship at the level of the process of PWHM.

FIGURE 6. Right Relationships Woven at the Level of the Process of PWHM
Right relationship at the level of the herbal medicine is the creation of concordance or a tailored herbal medicine that is personalized or fit to the person’s energetic pattern or constitution, the symptom variations, the root or cause of the dissonance, and the supporting structures and mechanisms. Right relationship at the level of the herbal medicine is depicted in figure 7.

**FIGURE 7.** Right Relationship at the Level of Personalized Herbal Medicine.

*Weaving a Tapestry of Right Relationships* includes *Exploring the Personal Composition, Interpreting Dissonance in the Personal Composition, Tailoring Herbal Medicine, Facilitating Success with Complementary Actions, and Evaluating Outcomes.* *Tailoring Herbal Medicine* is a subprocess of designing and fitting herbal medicines to the whole person at the level of symptom variations, energetic profile and tissue states, causative root, and ground substance resulting in concordance between the person experiencing chronic disease and the herbal medicine. The process, while primarily sequential, may loop back from evaluation to earlier steps of the process for modifications and fine-tuning of the medicine to weave a tapestry of right relationships and create concordance.
Conclusions Suggested by the Grounded Theory

1. The process of PWHM consists of five steps that weave a tapestry of right relationships. This includes a decision-making subprocess used to tailor herbal medicine that consists of five steps that creates concordance between the herbal medicine and the person with chronic disease.

2. *Weaving a Tapestry of Right Relationships* is person-centered, enabled by the therapeutic relationship, client commitment, strategies, knowledge, experience, the application of skills, and resources.

3. Herbalists engage in multiple ways or patterns of knowing to weave a tapestry of right relationships. The multiple ways of knowing include empirical knowing (science or discipline-bound experiential knowing), personal experiential knowing of the plants and herbal medicine, traditional knowing, aesthetic knowing, haptic, and intuitive knowing.

4. Herbal medicines are designed to address multiple layers and targeted affinities in the human organism to effect change in personal dynamics. The layers include personal symptom variations, causation with supporting mechanisms or structures (an interlacing of multiple factors), and energetics with reflected tissue states. A person’s energetic profile refers to the unique aggregate composite constituting each individual.

5. Traditional language is used to express how intentions of the herbal medicine and actions of the specific herbs in the medicine are matched to the personal composition of the recipient and alter dynamics.

6. Herbalists have interest in detailed accounts of symptom presentations and change in the person. Information gathering often proceeds from conventional diagnosis to unique symptom variations. Symptom presentations are used to design the herbal medicine.
Integration with the Literature

The literature review at the onset of this study provided an overview of the practice and science of Western herbal medicine and informed the researcher about the focus of this study and the initial research questions. Following theory development, the literature review focused on educational literature within the field of WHM pertaining to PWHM. The purpose of this review was to validate and confirm findings by looking at areas of convergence and divergence between the grounded theory and concepts and teachings on formulation in the field of WHM. Fifteen educational materials including course presentations, educational conference papers, and one text were evaluated. One educational materials author also participated as an expert in this study.

Convergence and Divergence with the Literature

Formulations were defined by Libster (2012) as “...a synergistic combination of herbs that represent different but complementary contributions of the energetic, biological, chemical, and spiritual aspects of the plants that will move the client toward a more balanced state” (Libster, p. 333). Libster discussed personalizing herbal medicine based on the relationship between the practitioner and client and the holistic assessment of the client. Libster presented plants as living, sentient organisms with energy fields interacting with human energy fields (p.12). Health was defined as harmony and balance. Healing was described as an exchange, movement, or shift of energy. Libster devoted significant attention to healing with plants as dependent on the practitioner partnering with plants. Partnering with plants originates in personal experiential relationships with plants that stems from working with plants, applying plants as medicine, reading about plants, and personal reflections on plants. While largely adapting a Traditional Chinese Medicine (TCM) perspective of constitutional energetics, Libster confirmed the essentialness of approaching herbal formulation from a perspective inclusive of energetics.
and considered the interpretation process a ‘reframing’ of information into an energetic system compatible with Western herbal medicine. Libster acknowledged a foundation of beliefs, education, and experience that reflect a life philosophy relevant to formulating herbal medicine.

Libster’s text on herbal medicine for the nurse herbalist provides a comprehensive narrative on the context of formulation based on personal experience. While the overall process of PWHM and the core concept of *Weaving a Tapestry of Right Relationships* are congruent, Libster discussed energetic pattern identification and interpretation, but lacked description of the concrete strategies and mental models to formulate personal herbal medicines. When discussing the construct of health, outcomes were implied, not explicitly described.

In 2012, Mase presented a paper on creating herbal protocols based on personal experience and education with herbal medicines. He identified beliefs about the holistic interaction of herbs with humans and how the quality of the interaction is fundamental to the process. This mental model is about how herbs act together in formulation with the client-focused interaction guiding the differentiation of the herbs selected for the medicines. Mase proposed a model that described the primary process of fitting available herbs by actions to the needs of the client by addressing constitutional patterns, tissue states, symptoms, spirit, and the ‘physiological’ or ‘biochemical hub’ of causation. In contrast to PWHM, Mase’s presentation did not include a discussion on gathering information, complementary actions, or outcomes. Although Mase’s presentation was consistent with the tailoring process of PWHM, PWHM is more inclusive than the information Mase presented.

Gladstar (2012) defined formulation as combining single herbs into one medicine with the intent to catalyze or move energy and enhance the overall medicine so that the sum is greater than the parts. She presented the importance of foundational knowledge of herbs, how they pair
or combine together, and an understanding of herb affinities for the human body. Knowledge of illness and personal constitution are essential for medicine formulation. Gladstar explained William LeSassier’s method of formulation, a triangular method or Triune system constituting a model using primary herbs (2-3 herbs or 70-80% of the formula), supporting and nurturing herbs (15-20%), and catalyzing herbs (5-10%) together in formulation. The triune system was elaborated on by Winston (2012) as a system that addresses the entire organism with the herbal formulation. Winston explained the primary herbs used in formulation would be herbs that tone and strengthen the organism. The primary herbs are combined with herbs that normalize and herbs for elimination. Each of these herbs is combined with connecting herbs. Both presentations focused on models of formulation and, while consistent with aspects of PWHM, the presentations focused exclusively on one step, tailoring herbal medicine.

The Eclectic Triphasic Medical System (ETMS) is described as a practitioner’s guide for developing a personalized patient-centered treatment regimen for patients with chronic disease. The ETMS constitutes a model of herbal medicine based on personal life and herbal medicine experience. Yance (2011b) wove biology (five organ networks and ‘molecular, cellular, and genomic terrain’) and constitutional energetics (five constitutional life forces) with spirit-driven inner forces and cosmic intelligence of traditional systems into a perspective synthesizing the spirit with the physical and the environmental. Treatments were aimed at the source or cause of the problem with the intent to bring harmony, balance, and support to the person. Formulation strategies included herbs to strengthen the person and weaken the disease or remove the toxins. Among the practitioners’ skills, Yance acknowledged reliance on intuition and defined intuition as a non-intellectual understanding of the “unfolding flow of interconnectedness” (p.5). He advocated applying multi-targeted formulations as a means to activate self-healing processes.
Healing in ETMS is transformation. While an abstract, eclectic and, at times, confusing presentation, the overall process was framed with beliefs, experiences, and knowledge informing the tailoring of herbal medicine and is consistent with PWHM. However, ETMS does not address the tailoring process with concrete strategies and models nor are outcomes or evaluation discussed.

Bergner (2006a, 2006b; 2010c) discussed formulation in one herbal medicine education course and three conference presentations. The formulation process was presented as a mental model of how herbs have historically been combined. The mental model of formulation Bergner provided was based on the pairing and tripling of the first 2-3 herbs in a formulation. These herbs are joined for synergy, direction of action, amplification, or for corrigent or balancing effects. Herbs 3-4 are directional herbs and herbs 4-5 are included to modify constitutional and tissue state imbalances. The strategy he recommended is for the practitioner to try the herbs before using them in formulation. This provides experiential knowing of the herbs used in formulation. The interactive process of client assessment is taught in later course work and is coupled with the formulation process in the clinical arena. Constitution was considered by Bergner to be a basic profile or description of the person with disease and herbs are used for a balancing effect based on the energetics of herbs and the constitution of the person. Energetics are described as overall summative characteristics of hot, cold, moist, and dry. The formulation information presented by Bergner was consistent with processes identified in PWHM, although the information was not organized consistently with PWHM and there was no discussion of outcomes.

Bove (2004c) presented on formulation (on two occasions) including strategies, resources, and guidelines. She suggested that formulations tone and support, raise the vital energy, and treat the symptoms along with the underlying cause using primary and secondary
herbs. Bove elucidated that models of formulation should include herbs that focus or guide primary herbs towards a specific direction. The combination of herbs determines the overall affect and influence of the formula. Bove considered resources for formulation to be knowledge concerning the client, traditional herb systems, biology, and medicine. Bove’s perspective was holistic, but did not address energetics. PWHM is congruent with the scope of Bove’s presentation on formulation, but is more inclusive and presents a more thorough process. Bove focused on tailoring and interpretation, but did not address exploration of the composition, evaluation, or variables to the process.

In 2001, Cronin presented three methods for prescribing herbal medicines and a model for formulation that included using singles, formulating for the physiological effect, and formulating for the individual constitution. From his perspective, formulating for the individual constitution creates a formula in resonance with the patient and condition or disease, addressing the core issues of what was occurring. The model used primary, secondary, activating, and tonifying herbs together (Cronin, 2001). This presentation of formulation was disease-focused and incomplete when compared to PWHM.

Cabrera (2000) defined healing as background to formulation and showed how the concept of healing, as self-healing, translated into formulations that support or restore self-healing. Cabrera based formulation on knowledge of the patient and a differential assessment of the patient’s problem and ‘causal chain of disease’. Cabrera’s presentation was the only report evaluated that identified formulation as process that progresses from assessment to diagnosis to treatment to follow-up. Cabrera proposed a model consisting of 2-3 parts for the primary condition, one part to relax, one part to strengthen or tone, and one part for elimination or alterative action. This presentation built on a previous discussion on formulation by Cabrera in
1999. In the earlier presentation, Cabrera (1999) was less process-based and presented strategies for reducing toxicities, nourishing, balancing, and tonifying with herbal formulations. Cabrera, like Bove, was holistic in goals and intentions but did not discuss energetics. Cabrera’s presentation was inclusive of process and congruent with PWHM with the exception of discussion of outcome or evaluation.

Upton (2000) related personal formulation to patient assessment and advised first addressing the symptoms, then addressing the underlying mechanisms with primary, secondary, tertiary, and constitution-balancing herbs. Upton recommended steps that match the action of the herbs to the needs of the patient and described constitution as inherent and acquired predispositions. PWHM is congruent with Upton’s presentation.

Burgess (1999) presented a whole person approach to formulation with steps to tailor herbal medicines to the individual. The steps included listing patient priorities, listing herbal actions and properties, listing actual herbs, and selecting and combining these herbs. There were no strategies for reducing the number of herbs used in the formulation other than potential limitations based on the goals to tone, balance, support, and restore, and the treatment of the cause and symptoms. Burgess applied a whole person approach but did not use an energetic approach. PWHM and particularly the subprocess core concept Creating Concordance were congruent with the steps and strategies Burgess presented.

Table 5 summarizes the mental models found in the educational literature for WHM. PWHM converges with the literature on all functions and concepts of the theory with the exception of mental models and outcomes. There were more mental models proposed in the literature than discussed in the process of PWHM and evaluation of outcomes was not part of the formulation process in the educational materials.
TABLE 39. *Summary of Mental Models of Formulation from the Literature*

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Summary of Mental Modes</th>
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| Bergner, p. (2010, 2006) | ➢ Herbs 1-3 paired for amplification, complementation, synergy, balancing energies or corrigent effect, or directing to emphasize one action  
➤ Herbs 2-4 to direct herbal action  
➤ Herbs 3-5 to modify constitution |
| Gladstar, R. (2012)   | LeSassier method:  
➤ Primary herbs – aimed at main problem (70-80%)  
➤ Supporting and nurturing herbs – soothe irritation (15-20%)  
➤ Catalyzing herbs – moves energy in the body (5-10%) |
➤ Neutral herbs (0) – normalize  
➤ Eliminators or detoxifiers (-)  
➤ Connecting herbs paired to other herbs to modulate action and for synergy |
| Cabrera, C. (2000)    | ➢ 2-3 parts for main condition  
➤ 1 part that soothes or relaxes (nervines)  
➤ 1 part strengthening or tonic (adaptogen)  
➤ 1 part eliminative/alterative/depurative |
| Upton, R. (2000)      | ➢ Primary + secondary + tertiary + constitution |

The presentations and educational materials reviewed were primarily experience-based and rooted in traditional teachings of how herbs work together. Models suggesting how herbs should be combined were associated with formulation and, thus, formulation was often presented separate from the client-focused interactive process. PWHM presents a process of formulation that includes the decision-making process of *Tailoring Herbal Medicine* in which models of formulation are resources for formulation. This is in contrast to being the focus of formulation. *Tailoring Herbal Medicine* is dependent on and part of PWHM encompassing a holistic assessment of the client, interpretation of the assessment, application of supportive options, and evaluations of outcomes. *Tailoring Herbal Medicine* is embedded in interaction and the therapeutic relationship of PWHM.

While several of the presenters and teachers discussed various aspects of the process of PWHM, none of the educational presentations provided the complete process including depth and dimension of all the functions and steps of PWHM. While the process of PWHM
demonstrates congruence with the collective thoughts contained in the current available educational materials, no one author has captured the entire process of formulation for WHM.

Two new steps in PWHM were identified in the current grounded theory, *Evaluating Outcomes* and *Facilitating Success with Complementary Actions*. Evaluation of outcomes was only addressed in the nurse-herbalist text and not in materials presented by herbalists. Complementary actions were addressed in earlier reviewed herbal medicine case studies but not in the educational materials on formulation. All the participants of this study discussed *Facilitating Success with Complementary Actions* and *Evaluating Outcomes* with herbal medicine.

**Summary of the Literature**

Collectively, the literature reflects all the steps of this process but with minimal attention to *Evaluating Outcomes* and associated time scales. Likewise, the literature provided mental models as the essence of formulation; whereas, PWHM presented mental models as a resource for formulating. PWHM integrates the formulation process and links it with client-centered interaction and the therapeutic relationship. Formulation occurs by *Weaving a Tapestry of Right Relationships* with a process enabled by commitment, relationship, knowledge, experiences, resources, and the application of skills. Righting relationships, concordance, and dynamic equilibrium result from personalized herbal medicines coupled with or embedded in the interactive process of PWHM.

**Congruence with Conceptual Framework**

The theories of Complex Adaptive Systems (CAS), Nonlinear Dynamic Systems (NLDS), and Social Network provided the perspective for this study. PWHM is a substantive theory explaining the relationship between conditions, actions, and consequences in the process
of formulating WHM for persons with chronic disease. As a whole system of medicine stemming from traditions of use, WHM is rooted in knowledge of the whole person and whole plants. The process of PWHM represents a contextualized process of the whole system of WHM consistent with the tenants of CAS, NLDS, and social network theories. Specifically, persons are complex systems as evidenced in the steps Exploring the Personal Composition, Interpreting Dissonance in the Personal Composition, Tailoring Herbal Medicine, Facilitating Success with Complementary Actions, and Evaluating Outcomes. Likewise, crude plants (and their extracts and combinations) utilized in personal formulations are complex systems. The process of PWHM integrates the tenets of CAS, NLDS, and social network theories at the person and plant levels, with emergent health and wellbeing.

**Persons as Complex Systems**

Persons as complex adaptive systems are whole systems with multiple structures and functions that exist in relationship with information networks and information exchange (Zimmerman et al., 2001). This integration in complex systems constitutes a whole system that is greater than the sum of the isolated part. CAS represents new, potentially unpredictable or nonlinear, order and configurations expressed as properties, behaviors, and outcomes that are emergent from multiple interactions of self-organizing systems (Koithan et al., 2012). Internal interactions, at the level of the person, and external interactions, at the level of the environment, exist at multiple levels of scale and are nested from local to global with bidirectional movement of information (Rioux, 2012).

In PWHM, the person as client is addressed as a unique integrated person. The person as a whole interactive system in relationship with the social and natural environments reverberates in gathering and interpreting information. The person is inextricably bound to internal and
external contexts and environments. In PWHM, patterns and streams of information are brought together and interpreted, providing a ‘hologram’ or ‘lattice’ of the person using the client’s subjective narrative coupled with the practitioner’s objective, sensory, and intuitive assessments and interpretations of the whole person. In order to weave a tapestry of right relationships and fit the herbal medicine to the person, the practitioner interprets the person’s presentation, symptom variations, energetic profile, biopsychosocial mechanisms, and supportive structures of disease and wellbeing, the emotional sense of self and spiritual sense of purpose, social-relational contexts, and the undergirding connectedness to the environment.

For the herbalist, there is an essentialness to addressing the person as energetic organism. Personal energy was described as movement, flow, and vibration and as informing matter similar to the flow, movement, and distribution of information in complex systems. Each person has overall energetic tendencies that form a unique profile of who the person is. Energetically, persons function within a range that represents a net balance of characteristics or an energetic profile defined by combinations of hot, cold, dry, and wet relative to a central origin on a coordinate plane.

While the origin on the coordinate plane represents balance or equal tendency and probability of all combined characteristics, persons are prone to imbalances. The tendency is to exist in one or more quadrants greater than all quadrants equally or towards the periphery more than towards the origin. The intersection of the axes represents ultimate flexibility where there would be movement through all the characteristics but not an extreme projection of any of them. Energy or constitution manifests outwardly in net temperature and fluid balances of the person and the tissue states of excitation and depression, constriction and relaxation, hypertrophy and
atrophy, or dissipation and stagnation. Hot, cold, dry, and wet represent figurative constellations as well as literal psycho-physiological patterns.

For herbal practitioners the person’s constitution or energetic profile was an indicator of whole system energetics. It was described as stable internal-external psycho-physiological traits or tendencies, the expression of which may, to varying degrees, be changing and flexible, depending on environmental conditions, internal states or perturbations, and developmental changes. The configuration of constitutional energetics resembles the attractor models of complex systems where disease results in extreme imbalance and a pull to the periphery of a field or a bifurcation in the trajectory of an attractor.

Energy is also a net presentation of the person likened to “fields”. Likewise, energy is a moving organizing force that “informs matter”. Energetics or constitution provided common conceptual understandings and language to talk about the integration and self-organization of the whole person, giving rise to emergent complexity. Energy as expressed by a person’s constitution represents self-organization that brings forth order, enhanced complexity, and unity or increased coherence in whole systems. It is this whole person approach and interpretation of the person as an interacting and integrated complex system that provides the basis for personalized herbal medicine.

**Herbal Medicines as Complex Systems**

Plants in their natural state, as vital and living organisms, are emergent complex systems comprised of multiple interconnected parts and pathways for information exchange. Multiple chemicals interact for adaptation and self-organization within the plant (Spelman, 2011). Plants minimally processed and utilized close to the natural state as crude plant medicines retain maximum complexity and, when used together in formulation, are synergistic. Due to the
interaction of the phytochemical parts in complex plant systems, synergy occurs when the action of the whole plant is greater or broader than when the plant constituents are separated out. Healing from whole medicinal crude plants is emergent and is not predictable from knowledge or understanding of isolated constituents.

In CAS, there is an interconnectedness of personal systems and the external environmental. For the herbalist, the connections with the natural world of plants constitute the basis of health and wellbeing in persons. The interactions between humans and plants ultimately manifest expressions of humanity. Expressions of humanity are inextricably bound to plants due to coherent coupling in coevolution (Spelman, 2011). This is a time-intensive partnering of the personal system with environmental plant systems and accounts for informational exchanges and structural changes in persons and plants over time. Intact medicinal plants with multiple affinities for the human organism engage networks and channels of information, resulting in multiple local perturbations or a broad base of impact and nonlinear global effects that may be unexpected in relationship to the cause (Spelman, 2011). Crude plant medicine may likely generate personal self-organization and emergence relative to the timing of the information exchange and the flexibility and responsiveness of the organism (Spelman, 2011).

**Health and Healing in Complex Systems**

Healthy whole systems demonstrate and express complexity. Healthy whole systems display variability and are adaptable, demonstrating flexibility with the capability to change, modify, or self-adjust in response to changing environments. Healthy whole systems are robust in that they are able to respond to disturbances, or absorb excess noise, as well as flourish (Fredrickson & Losada, 2005; Kitano, 2004). The proposed grounded theory is predicated upon the participants’ beliefs about health as a personal process of moving and balancing energy and a
dynamic state of relative balance or dynamic equilibrium. Herbal medicines were described as nutritive, restorative, and supportive and as perturbing and moving, allowing for personal change or self-healing.

Healing in complex systems may be nonlinear with disproportionate cause and effect. Either the cause is small and brings forth a large outcome or, conversely, a small outcome may result from a large cause. In systems with nested relationships and fractal configurations, a local perturbation or irritation may elicit broad or global responses. The process of healing as a holistic and individual phenomenon or expression may not necessarily be related to pre-identified, static, or expected outcomes like those associated with curing disease, but instead may be related to subjective qualitative changes that may be small, gradual, gentle, or pronounced, nondirectional, immeasurable, and unexpected. Rather than being specific to the herbal formulation, outcomes may be specific to the persons taking the medicines. Healing may be a slight shift or movement in the dynamics of the whole organism. As one participant stated, a shift might mean there is a “…change in self-awareness”. Health for the person with chronic disease utilizing personal herbal medicines may be emergent equilibrium with new properties and functional dimensions that redefine their experience with chronic disease.

The healthy system is complex and robust, whereas disease is demonstrated as a loss of variability and complexity (Kitano, 2004). WHM considers disease or loss of complexity as blockage, constriction, stagnation, sluggishness, relaxation, depletion or excess, and loss of connection. Disease interferes with the natural movement and flow of energy of the person or between the person and the energetic fields they interact with. Personalized herbal medicines are treatments of complexity with the intent to restore movement, flow, and “connection to the
earth”. Persons as complex systems interacting with plants as complex systems form the foundation for emergent forms of healing.

**The Encounter as a Complex Social System**

The practice of WHM comprises layers of complex engagement and relationships between the client, practitioner, and herbal medicine. The complex person networked in the social dyad of client and practitioner is contextualized in this dyad with social networks or webs of relationships. These social relationships potentially modify and affect the process and outcomes associated with the herbal medicine encounter. The functions of the social networks that practitioner and client bring into the social dyad include social capital or resources, influence, and support systems (emotional, informational, and instrumental). Likewise, social undermining, density, intensity, and complexity as characteristics of social networks may alter or affect the process of PWHM (Glanz, Rimer, & Viswanath, 2008). In PWHM, the moderating and mediating factors arise from the client’s and practitioner’s social networks and impact the process at multiple points and may influence outcomes of the process.

**Summary**

This section summarized the appropriateness and congruence of the theoretical framework used to contextualize this study to the process of PWHM. *Weaving a Tapestry of Right Relationships* reflects a CAS perspective, where right relationship refers to the integration of nested connections and interactions of the parts within (biopsychospiritual) and extending out from the whole person to the social, environmental, and the universal. Right relationships refer to the whole coherent person as being a function of the relationship of the parts. This is consistent with CAS, NLDS and Social Network theories.
While the questions were developed ahead of time by the researcher, the participants were unaware that this study was framed by the theories of complexity. Yet, there was a high level of congruence between the participant responses and the complexity theories. PWHM is a substantive theory of the process of formulating personal herbal medicines reflective of the complexity inherent in reality. Likewise, it is congruent with the theories of CAS, NLDS, and Social Network.

**Congruence with Personalized Medicine**

PWHM is the process of formulating used by WHM practitioners. While models and concepts of personalized medicine or person-centered care are not new (Reynolds, 2012), there is a renewed interest in personalized medicine as an alternative to the disease-centered and clinician-centered approach and the ‘one-size-fits-all’ laboratory medicine of current health care (Tutton, 2012). This section will define person-centered care and discuss the WHM process of PWHM in relation to other whole systems of healthcare.

**Personalized Medicine and Personalizing Western Herbal Medicine**

Reynolds (2012) defines personalized medicine as the individualization of therapeutic interventions tailored to the disease, demographics, genetics, environment, lifestyle, and health issues (p. 401). Personalized medicine ranges from pharmacogenomics models to models designed around patient participation and decision-making. Pharmacogenomic models base the delivery of pharmaceutical treatments on known personal genetic variations leading to optimal drug delivery, drug response, and safety (Crews, Hicks, Pui, Relling, & Evans, 2012; Whirl-Carrillo et al., 2012). In contrast to the pharmacogenomic model of personalized medicine, participatory models are integrated at different levels, including the application of personal approaches to diagnostics and interventions as well as a focus on greater involvement and
decision-making among patients with long-term or chronic conditions (Evers et al., 2012; Walker et al., 2011). The participatory model of personalized care represents conceptual shifts in health care to include considerations of the patient’s psychosocial and environmental influences and perspectives of their own health process (C. Hayes & Hodson, 2011).

Personalized medicine is the term clinicians use to describe collaborative person-centered care in which patients’ perspectives, personal changes, and experiences are considered while making clinical judgments (Currow & Abernethy, 2012; Tutton, 2012). Morgan and Yoder (2012) defined person-centered care as:

“…a holistic (bio-psychosocial-spiritual) approach to delivering care that is respectful and individualized, allowing negotiation of care, and offering choice through a therapeutic relationship where persons are empowered to be involved in health decisions at whatever level is desired by the individual who is receiving care” (p.8)

When a concept analysis of person-centered care was performed in post-acute health care settings for persons with chronic disease, Morgan and Yoder identified four essential attributes of the person-centered care concept: holistic care, individualized, respectful, and empowering.

Holistic care recognizes and values whole persons (bio-psychosocial-spiritual) as well as the interdependence of their parts. It brings a comprehensive understanding of the entire person and the effects of illness to clinical decision-making. Individualized care occurs when customized care and interventions address the unique and person-specific concerns. Individualized care hinges on knowledge of the life experiences, personal histories, personalities, and perspectives of the person. Individualized care is centered on the person’s perceptions of needs and personal preferences. Respectful refers to the recognition that persons are competent and active participants in personal health care decision-making. Empowering is the enabling of the person’s autonomy and self-confidence to participate in personal health care. The attributes
of person-centered care are focused on the individual patient and are relevant attributes for any health care environment.

Morgan and Yoder’s (2012) model of person-centered care is a holistic client-centered care model familiar to nurses. PWHM is a holistic person-centered approach consistent with nursing’s conceptual approach to person-centered care. Morgan and Yoder’s four attributes frame the steps comprising PWHM. Study participants consistently considered respect for the patient’s values, preferences, and expressed needs as a starting point and as a consideration throughout the process of formulating herbal medicine. The comprehensive client assessments performed by the herbalists and the interpretation of those assessments were repeatedly qualified with referencing back to the client’s own goals, intentions, and commitments. When tailoring herbal medicine, strategies are employed that promote the client’s success with herbal medicine. These strategies revolve around the client’s preferences and lifestyle, enabling participation with the herbal medicine. Likewise, evaluations of client outcomes are qualitative, subjectively defined by the client and personalized. Outcomes to personal herbal medicines are not depersonalized pre-established single-entity measures derived from uniformity of response. Instead, they are personal, complex, and variable.

In the theory of PWHM, clients are viewed as self-determining persons nested in support systems of family, friends, co-workers, and healthcare providers. Herbal practitioners empower and inspire the client to make life-choices and to elicit the support necessary to be successful with choices consistent with health and wellbeing. Herbalists “co-create” health by educating and sharing information on physiology, pharmacology, basic self-care, and personal health choices. Educating and informing clients is possible insofar as the interaction, communication, and relationship between herbalist and client is trusting and supportive.
Herbal practitioners work with clients in the overall context of the client’s existing health care to coordinate herbal medicine with concurrent use of pharmaceuticals and integrate involvement with other practitioners with different diagnostic and treatment philosophies. This requires herbal practitioners to be open, flexible, and collaborative for the wellbeing of the client. One participant considered this the ‘mercurial’ nature of the herbalist, the ability to flow between different health care models.

Being respectful of the client, herbal practitioners address physical comfort or presenting symptoms or sources of irritation as a first strategy of formulation or with the initial medicine. Directional herbs, or herbs used for the pharmacological action, treat physical discomfort. Presenting symptoms are approached from the perspective of comfort and restoration. Restoration refers to the support and promotion of healing at the source and contributing factors of the problem. Often this involves treating the gut and organs of detoxification first, to enhance assimilation and metabolism of herbal medicines and nutrients. Herbalists consider physical discomfort or presenting symptoms as nested with underlying and extending imbalances that need nudging with nutritive, supportive, or tonic herbal medicines.

Likewise, the holistic and respectful person-centered care of the herbal practitioner includes formulating for immediate and long-term emotional support and alleviation of anxiety for persons with chronic disease. Herbal practitioners relate healing to parasympathetic functioning. In other words, in order to heal, persons need to be more parasympathetic dominant than sympathetic dominant. Practitioners use the combination of adaptogenic and nervine herbs to bring the client into the parasympathetic mode immediately and, in the long term, support a more responsive autonomic function allowing for parasympathetic dominance. Emotional support is addressed within the context of the person’s spirit, including perceptions and
experiences of energy, purpose, joy, and fulfillment. Herbalists use small doses of herbs within formulation to affect or move the spirit and to explore emotional or spiritual issues within the context of the therapeutic relationship.

PWHM is a process of formulating Western herbal medicine that is fit and attuned to the person with chronic disease. PWHM explains a process that weaves a tapestry of right relationships. It is interactive, includes decision-making, and focuses on the right relationships within and extending out from the personal client from the beginning of the encounter through the follow-up interactions. Concordance is agreement or the right relationship between the individual client and the herbal medicine that is solidly based on getting to know the individual, the individual’s goals and intentions, and respect for the person’s self-determination. While PWHM is personalized at the level of interaction, it is also personalized at the macro-level of matching treatment or herbal medicine to the unique energetics or constitution of each person.

**Personalized Medicine in Whole Systems of Medicine**

Whole systems of medicine offer additional perspectives on personalized medicine. Whole systems of medicine such as TCM, Ayurveda, Tibetan, Sasang, and homeopathy emphasize individual differences in personal medicine (Cameron et al., 2012; Gaylord & Davidson, 1998; Kim, Pham, & Koh, 2011; Sumantran & Tillu, 2012; Q. Wang, 2012). This is addressed at the level of the individual constitution with constitutional evaluations and targeted treatments. Constitutional evaluation is considered macro-level personalized medicine in contrast to the micro level or genome-treatment fit (Q. Wang, 2012). Wang (2012) states the purpose of “individualized medicine is to create awareness of individual differences” (p.1). In constitutional medicine, health and disease are contextualized by the individual person’s social and natural environments (Q. Wang, 2012). Constitution is regarded as the expression of genetics,
environmental conditions, physicality of the person, and functional state and is a cohesive aggregate of the unique individual that takes into consideration patterns, regularities, and organizing tendencies of the person (Q. Wang, 2012).

In TCM, Sasang, Tibetan, Ayurveda, and homeopathy, constitutional classifications are predictive of disease or predispositions to disease by providing an internal basis for specific imbalances. Constitutional medicine also provides direction for treatment (Cameron et al., 2012; Gaylord & Davidson, 1998; Sumantran & Tillu, 2012; J. Wang et al., 2011; Yoo, Lee, Kim, Lee, & Lixing, 2012). While each system of constitutional medicine has different constitutional energetic classification systems, the use of constitution to differentiate the unique natural tendencies and strengths and weaknesses of individuals is constant. TCM bases constitutional assessments on yin/yang and five-element energetics, body posture, functional and mental states (Q. Wang, 2012). Tibetan constitutional medicine is based on combinations of three energies. Sasang is based on a four constitutional typology and Ayurveda is grounded in a hereditary constitution with changing expressions in combinations of three typologies due to interaction with the environment (Kim et al., 2011; Rioux, 2012). Constitution in homeopathy represents an aggregate of symptoms and personal circumstances based on multiple blended typologies (Gaylord & Davidson, 1998).

The essential difference between constitutional medicines of TCM, Sasang, Tibetan, Ayurveda, and homeopathy is the application of treatment. Tibetan, Sasang, and Ayurveda herbal medicines are energetically-matched or opposed to the constitution to balance or counteract existing imbalances caused by disease, environment, weather, ways of thinking, or life-style choices like diet (Kim et al., 2011). Therefore, the constitutional type determines herb compatibility and the particular selection and mix of herbs (Kim et al., 2011). In TCM, the
pathology and syndrome of the person is foremost and herbs are used primarily for their pharmacological actions (Kim et al., 2011). In Tibetan constitutional medicine, creating a balanced constitution is healing the source of the problem (Cameron et al., 2012). Homeopathy classifies remedies according to clusters of features that match constitutional typologies. Constitution expresses attributes of the remedy. Treatment in homeopathy is driven by the Law of Similars, which is based on the principle of ‘like cures like’. Therefore, the remedy is like the constitution, which is the composite of symptoms and circumstances (Gaylord & Davidson, 1998). Overall, the primary differences between the aforesaid whole systems of medicine, in the use of constitution to guide treatment, are a difference of value or emphasis constitution plays in treatment design and how the treatment is applied related to constitution.

Constitutional energetics in PWHM has been adapted from humoral medical systems and reflects the whole integrated person. Constitution is stable, referring to that which is inherited or acquired from birth, and dynamic, flexible, and malleable energy in relation to weather, environment, developmental stages, life choices, and disease.

Likewise, personal energetics is intelligent organization. Constitution is not predictive of disease, although a person’s constitution is potentially a predisposing factor for particular diseases. Constitution is a functional tool for coordinating the characteristics of the herbal medicine to the person in a balancing or opposing manner. Constitution is integral to the fit or concordance between the person and the medicine. In PWHM, the essentialness of using herbs energetically, in concert with the clients’ energy, is to achieve a good fit necessary for a shift in wellbeing.

WHM shares a whole systems perspective of person and healing with the aforesaid whole systems of medicine applying constitutional medicine (Kim et al., 2011). Constitution or
energetics represents the unified and integrated emergent whole system with multiple causative relationships contributing to imbalance. Constitutional medicine as an aggregate or collective summation identifies patterns and regularities of personal difference at a macro level for treatment purposes. A proposition can be made that constitutional medicine, as typology, in reality looks at differences at the level of the subpopulation and not at the level of the individual. Hypothetically, if constitutional medicine rigidly adhered to a set of constitutional types, typology may be true. However, constitution is conceptually flexible and expansive, inclusive of the whole person in relationship to the person’s biopsychospiritual, social, and natural environments. The concept of constitution is dynamic and contextual and reflects the interactive whole person. One study participant reflected on this when she said that herbal medicine addresses the physical presentation of the client, the psychosocial-emotional responses and choices, the spiritual journey, and relationship with the earth, all while constitution “runs in the background” (I-15). Another participant described constitution in formulation as the “backseat driver” (I-14). While constitution is not the sole focus of PWHM, it is often associated with the cause of dissonance. PWHM is congruent with personalizing care at the constitutional or whole-person level. Likewise, PWHM is consistent with nursing as person-centered care at the level of client participation and interaction, defined as individual, respectful, holistic, and empowering.

**Implications**

**Theoretical Implications**

PWHM presents a systematically-derived definition and explanation of the process of formulating herbal medicine within the practice of WHM. Thus, PWHM will serve to develop the science of WHM, generate knowledge, shape practice, and create social value for WHM. Theory in a discipline or group of practitioners is foundational for practice, education, and
research (Sidani et al., 2004). The existence and future of the practice of WHM depends on the credibility and accountability of practitioners and on documentation and validation of what they do. Grounded theory, as a systematic approach, contributes to practice, education, research, and future documentation.

While based on traditional practices, the evolution and adaptation of the practice of WHM has redefined and modified herbal traditions. Today’s practice of herbal medicine in the United States is an amalgamation of herbal medicine systems of practice. Influential WHM educators teach and integrate WHM with principles of TCM, Ayurveda, homeopathy, naturopathy, folk herbalism, and modern research. Likewise, there is a continuous educational presence and referring back to the physiomedicalist and eclectic teachings on herbal medicine. Although WHM encompasses a broad spectrum of practitioners and diverse practice patterns, the practice patterns are based on few current practice theories. WHM, to this point, has not systematically constructed theories reflecting collective approaches to Western herbal medicine.

The theory of PWHM brings widely divergent beliefs and practices into a complete and integrated process that clearly defines what practitioners do when they formulate WHM for persons with chronic disease. This grounded theory provides substance, boundaries, and essential concepts defining the formulation process. It draws attention to and creates awareness of the shared process, the therapeutic relationship, and WHM as a whole system of medicine. PWHM brings scientific knowledge development and contributes to the definition of WHM. Likewise, PWHM challenges ideas and concepts associated with formulation and the education and practice of formulation in WHM. This theory challenges perceptions in WHM of how knowledge is derived and constructed. And finally, PWHM demonstrates that WHM is a whole system of medicine where both plants and persons are complex adaptive systems with emergent nonlinear
healing and person-centered outcomes. WHM as a whole system of medicine is in contrast to the current application of herbal medicine with the pharmaceutical model.

Applying the reductionistic pharmaceutical model of research to WHM, including profit-driven research of highly processed and purified herb products, active ingredients, isolated fractions, and synthetic plant constituents, has resulted in a co-opting of herbal medicine by the biomedical sector (Fisher & Singer, 2007). This has placed considerable pressure on WHM to change and evolve, to modernize, to move into the mainstream and to increase credibility by association with biomedical science. However, biomedicine has not preserved the traditional knowledge of WHM and fails to thoughtfully and responsibly recognize the complexity of herbal medicine. The application of a linear biomedical or pharmaceutical model to WHM will distort, dismantle, and render unidentifiable a whole system of medicine that holds a plethora of experiential knowledge and future discovery in holistic healing practices. Although specific scientific research from biomedicine may be useful to WHM, it is important that the theories framing WHM enhance the social value, foster accountability, and generate knowledge that captures the complexity of WHM. In essence, theory development and research should complement WHM as a whole system of medicine with a unique personal approach.

PWHM is a theoretical process that explains the formulations of herbal medicines with sequential steps, each contingent on the previous step. The process of PWHM is unique to WHM and has value insofar as it leads to a theory-driven approach to herbal medicine practice, education, accountability for the public services provided, and knowledge generation through discipline-specific research.
Practice Implications

As practice theory, PWHM is grounded in the real-life diverse experiences of herbal practitioners. Practice theories are an important step towards creating social value for practitioners of a practice discipline. In WHM, the practitioners benefiting from theory development include Western herbal practitioners, folk herbalists, registered herbalists, and nurse herbalists. Social value comes from the application of knowledge within the practice of a discipline that promotes and benefits the client (Sidani et al., 2004). Realizing social value is the responsibility of the discipline and implies public or social accountability of a group of practitioners. Social value is related to the demand for service and, thus, the continuation of socially-sanctioned services. Social value adds quality to practice and is leveraged with discipline-specific practice theories. Likewise, practice theories guide discipline-specific education. The diversity within a group of practitioners should reflect a diversity of practice theories for that group of practitioners.

PWHM is specific and relative to the practice of Western herbal medicine and is framed and contextualized by social structures, practitioner and client characteristics, beliefs, knowledge, experiences, expectations, attitudes, and the social environment of the encounter. Because PWHM is specific to Western herbal medicine, it provides a rational basis for the practice and teaching of formulating Western herbal medicines. Furthermore, literature and educational materials in WHM provide minimal discussions of outcomes to herbal medicines. PWHM brings needed attention to evaluation of practice and client outcomes. Evaluating outcomes is practicing accountably.

PWHM is a practice theory for a whole system of medicine where the focus is on right relationships or the interactions of the living organisms, persons, and plants. This theory
embodies concepts of persons and plants as complex adaptive systems, mechanisms of interaction as nonlinear and dynamic, and health as emergent complexity. This is in contrast to a focus on the singularity of symptoms and disease characteristic of reductionist practices. Practice theories can shed light on the complexity implicit in whole systems of medicine.

**Education Implications**

PWHM provides a framework for education in WHM. In WHM, teaching formulation is often done experientially in the clinical arena with the input from several students involved in a single client case. This theory of formulating personal herbal medicines provides a basis and structure for the development of educational competencies that can frame teaching and establish standards of proficiency in formulation. The substantive and methodological properties and dimensions of each step provide needed content on what and how to formulate. In short, PWHM can be translated to curriculum for education in herbal medicine.

**Research Implications**

PWHM provides a framework for future research on formulation in WHM. Theory, by nature, warrants further study and exploration. PWHM requires research at each level of the theory. Research will rewrite this theory by driving adaptations, modifications, and elaborations. These changes will influence the practice of Western herbal medicine.

Because the use of complex whole medicinal plants in multiple plant formulations are coupled with supportive actions and are embedded in an interactive social process, the study of PWHM does not lend itself to the single-model, randomized, gold-standard clinical study. Herbal medicines are personally-tailored, using particular strategies and models conditioned on a whole person-in-context assessment and interpretation of the unique personal circumstance. The process of PWHM is designing herbal medicines by weaving a tapestry of right relationships
with multiple layers of biopsychosocial-spiritual-environmental elements that give rise to associated changes and emergent personal coherence. This is contingent on understanding the interactions of person and plants as complex energetic organisms and moves research of herbal medicines away from a focus on singular ‘mechanisms of action’ with static measurable outcomes to research of whole complex systems.

Research is needed that identifies crucial or essential features of the process of PWHM, including mediating and modifying conditions and factors. Understanding how characteristics of the client or practitioner potentially impact or correlate to the outcomes of this process and change the process is necessary in order to more fully understand WHM formulation. Differentiating the application of this theory for various client populations, like those receiving herbal medicines for acute illnesses or those receiving pharmaceuticals would add needed knowledge to WHM. Participants conveyed that the process for formulating herbal medicines for persons with chronic disease was different from that used with acute illness or with persons on pharmaceuticals. Likewise, participants discussed specific strategies used to deal with chronic disease and the presence of pharmaceuticals. PWHM is specific to persons with chronic disease. There is no theory on formulating for acute illness.

There is little discussion in herbal medicine literature about outcomes or the time scales for outcomes. For instance, what is expected with herbal medicine and how does the practitioner know when to change or stop the herbal medicine? Participants in this study referred to seeing different outcomes over time. Research in WHM that includes studying outcomes along multiple time scales would be useful for the practitioner. Likewise, WHM would benefit from exploring concepts related to client shifts and herbal medicine fit and if the client perceptions of outcomes are the same as the practitioner’s perceptions. It may be of interest to know if particular
strategies translate into improved functioning, reduced symptomology, or greater perceptions of wellbeing.

Research on PWHM will provide the opportunity to explore new methods and measurement options useful with whole systems of medicine. Research designs are needed that address the complexity of using multiple whole plant formulations tailored individually to each client. Outcome measures can be developed that capture real-life experiences, herbal formulation effectiveness, and qualitative reports of restoration and balance. Subtle change as well as transformative changes could be addressed in outcome measures designed for WHM treatment with complex herbal medicine formulations.

Theories are tentative and subject to dissolution, change, or modification depending on the research generated from them. PWHM, while serving a purpose now, may in the long run function to document the evolution and adaptation of WHM as a whole system of medicine.

**Nursing Implications**

Nurses are interested in herbal medicine and share a holistic and phenomenological approach to patient interaction with herbal medicine practitioners. Holism for both nurses and herbalists refers to the whole patient and whole native plant where the whole, as a function of the relationship of the parts, is greater than the sum of the parts and cannot be known through knowledge of the parts (Mills & Bone, 2000). Likewise, healing is emergent coherence of the whole where there is dynamic harmony of the whole bodymindspirit (Quinn, 2013). For nurses, the patient narrative or “story” constructed in the nurse-patient interaction constitutes what is meaningful for the patient and is essential for the healing process (Reich & Michaels, 2011). Likewise, the story is the vehicle for healing, and as collective anecdote, is how traditional knowledge is preserved and transferred (Johnson, 1992).
Nurse herbalists follow the historical practice of nurses independently using herbal medicines for healing (Libster, 2004). Crude plant medicines were essential to Nightingale (Nightingale-Museum, 2006). She connected healing to the internal and external environment surrounding the patient and expounded on the belief, common in her time, that healing, like weaving the right relationships, is to “…assist nature…because nature alone cures.” She also expressed that nurses act to “…put the patient in the best condition for nature to act upon him” (Nightingale, 1859/1992, p. 75).

The theory of PWHM offers the nurse herbalist a theory for the practice, education, and research of formulating herbal medicines in chronic disease that is consistent with the nursing theories of Parse and Rogers and the unitary-transformative metaparadigm of nursing which embeds the evolving self-organizing human in environments through constant interaction. The theory of PWHM is a transdisciplinary practice theory consistent with nursing theory with implications for nurse herbalists in practice, education, and research.

Summary

*Personalizing Western Herbal Medicine: Weaving a Tapestry of Right Relationships*, as a practice-based theory, is relevant for herbal practitioners and nurse herbalists. As a theory, PWHM creates social value and is foundational for herbal medicine practice, education, and research. Likewise, PWHM is consistent with major nursing theorists and offers a framework for practice, education, and research for nurse herbalists. This unique practice-based theory will adapt, grow, and be modified with research. PWHM documents the current practice of formulation, builds knowledge, and contributes to the art and science of herbal medicine.
**Strengths and Limitations of the Study**

PWHM is derived from the real-life experiences of 17 herbalists. The study demonstrated rigor and trustworthiness by staying true to the systematic grounded theory schema proposed by Corbin and Strauss (2008) from data collection through data analysis. In addition, rigor was assured with prolonged and repeat engagement with study participants, the use of different data sources (notes, observations and interviews), and with journaling and peer debriefing. Confirmability of the findings was assured with transparency of methods, audit trails, and repeat verification interviews with participants. The report of this study demonstrates believability and applicability of findings.

My background as a nurse practitioner provided both challenges and benefits. Three participants, aware of my associations with conventional healthcare, initially conveyed suspicions about my motives for this research. The suspicions were relieved with awareness of my participation in WHM. As a nurse practitioner, the depth of knowledge related to problem-solving processes, anatomy and physiology, disease pathophysiology, and pharmacology provided a knowledge base that was helpful in understanding the participants’ thoughts about chronic disease, assessment, and interpretation processes. On the other hand, while analyzing the data, it was, at times, a challenge to think outside the “nursing framework” or “nursing process” box.

My background as an herbalist provided sensitization to the subject that was a benefit to conducting this study. It provided access to recruitment and gave me a ‘way in’ with the participants. I knew the challenges herbalists are facing today, the language of ‘herbalism’ as well as the herb categories, actions, and herbs referenced. Overall, my knowledge and experience as an herbalist and nurse practitioner benefited this study. Theoretical sensitivity was addressed
with journaling and peer debriefing by the committee consultant and the research chairperson to prevent the overuse of previous knowledge.

As with most research, the nature of the interactions between the researcher and the participants may limit the data collection process. Although participants were encouraged to freely express their thoughts regarding the formulation of herbal medicine, the questions I asked may have potentially constrained and shaped the responses. Likewise, the context of the interviews, conducted by phone and Skype, may have framed the data collection differently than interviewing face to face with the participants. As my interviewing skills improved over the course of data collection (interviews), the data collected in the later interviews may have been more extensive than in the first few interviews.

The fact that more mental models of formulation were found in the literature than discussed and utilized by study participants may represent a lack of category saturation. More likely, it indicates the role of mental models as resources for expert practitioners. In the educational materials, mental models are teaching guides for formulation based on historical models and information provided by expert practitioners. The participants in this study were all experienced and expert herbalists with long histories of formulating herbal medicines. The utility of mental models may be primarily as an educational tool for novice herbalists. The use of mental models may be a differentiating factor between the expert and novice herbal medicine practitioner. This area needs further research to clarify the role of mental models of formulation.

A strength of this study is that it contributes to the practice of WHM. PWHM is a practice-based theory based on the systematic analysis of 39 interviews from 17 expert herbalists practicing WHM throughout the US. PWHM provides a comprehensive process for the formulation of personalized herbal medicine within the practice of whole systems WHM. The
process of PWHM and *Weaving a Tapestry of Right Relationships* explains how WHM practitioners formulate individual herbal medicines for persons with chronic disease. It is explained with a client-centered interactive process embedded with a decision-making process. This links the application of whole plant medicine with the client-practitioner relationship and treatment approach. The personal interactive approach in right relationship with the medicine may, to a greater extent, explain the outcomes to herbal medicine than the particular herbal medicine formula.

Another strength of this study is that it brings needed attention to evaluation of clinical outcomes. Outcomes to personalized herbal medicines and the associated time scales, while broadly discussed by participants, are minimally addressed in the herbal medicine literature. Likewise, there is minimal attention given to the unique value and emphasis placed on the investigation of symptom variations. Herbal practitioners are often presented with a medical diagnosis and assess the client to evaluate symptoms expressions, changes, and patterns with emphasis on the unique personal expressions and differences. The goal is not to reduce or differentiate a diagnosis but to see the variation. The variation offers differential indicators for specific herbs.

Formulation is seldom addressed as a complete client-centered process in the educational materials in WHM; nor has it been research based. The focus of the educational materials has been on objective or decontextualized mental models of formulation. This may account for the lack of consistent attention given to the multiple layers or affinities that personal formulations are designed to address and to outcomes from formulation.

Finally, this study addresses different ways of knowing discussed by herbal practitioners. Herbal medicine literature mentions traditional, empirical, and personal experiential knowing,
including knowing related to experiencing the plants within relationship. However, there is little information on herbal practitioners’ use of haptic, intuitive and aesthetic knowing. This area needs further clarification with research.

**Recommendations**

This study represents the first phase in a program of research in herbal medicine. The grounded theory PWHM provides ample research options. The next phase of this study may likely include a review of cases written by herbal practitioners submitted to the American Herbalists Guild as part of the application process for registered membership. These case studies would be analyzed for content related to the process of *Personalizing Western Herbal Medicine: Weaving a Tapestry of Right Relationships*.

For future research, the process of PWHM has generated the following questions.

- What constitutes fit and shift and what outcome measures should be used to capture the healing experience of persons using personalized herbal medicines?
- Is a person’s experience or history with herbal medicine correlated to outcome and the time it takes for the person to experience that outcome? If so, is this predictive?
- Participants spoke about removing toxins while using restorative and nutritive herbs in formulation. What are the beliefs surrounding this and what is the process of removing toxins or cleansing with herbal medicine?
- Are personalized herbal medicines, comprised of 4-7 herbs in formulation, more effective when used for a specific chronic disease than placebo or single-herb products? And, are personalized herbal medicines positively correlated to flourishing or measures of health, wellbeing, improved functioning, and contentment?
Summary

The aim of this study was to develop a grounded theory that explains how WHM practitioners formulate crude plant medicines to individuals with chronic disease. A BSPP of Personalizing Western Herbal Medicine was constructed from data grounded in the practice of WHM practitioners. When herbal practitioners personalize herbal medicines they are Weaving a Tapestry of Right Relationships and Creating Concordance or right relationship between the whole person and the herbal medicine. Right relationship refers to the integration of nested connections and interactions of the parts within (biopsychospiritual), and extending out from the whole person to the social, environmental, and the universal that gives rise to greater coherence in whole systems. This is consistent with CAS, NLDS, and social network theories.

In contrast to the reductionistic application of herbs as pharmaceutical medicines, PWHM describes an approach to herbal medicine that embeds personally formulated herbal medicines within a social-interactive, client-centered therapeutic relationship and time-intensive process complemented with measures to support right relationships. This research is an initial grounded theory constructed for WHM and while documenting the existing practice of WHM this study also contributes to the credibility, social value, and knowledge construction in WHM.
APPENDIX A:

REVIEW OF THE LITERATURE: PRACTICE PATTERNS
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Type of Article</th>
<th>Chronic disease</th>
<th>Treatment</th>
<th>Traditional Herbal Practice Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caldecott</td>
<td>2000</td>
<td>Case history</td>
<td>Chronic sinusitis with history of cardiac arrhythmia with AICD, hypothyroidism, anxiety, indigestion, menopausal symptoms</td>
<td>Formulations: addressing sinus, gut health, menopausal symptoms (3 months) o 7 herb tincture &amp; o 5 herb tincture Reduced to one polyherb formula after 3 months.</td>
<td></td>
</tr>
<tr>
<td>Trickey &amp; McElroy</td>
<td>Trickey 2000 Part I General Herbal Practice-informative</td>
<td>Mood instability related to PMS, pregnancy, menopause</td>
<td>Formulation examples: 3-4 herbs each formula, differentiated by pathology and presentation Additionally: diet, nutritional supplements, exercise, stress reduction</td>
<td>Herb classifications: Nervine, tonic, stimulant, nutritive, Preparations: singles differentiated from polyherb formulas, tincture formulas, Treatment of cause and symptoms</td>
<td></td>
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<tr>
<td>Yarnell</td>
<td>2001</td>
<td>Case history</td>
<td>Menorrhagia Gastroesophageal reflux Asthma Diabetes Mellitus (unspecified)</td>
<td>Formulations: o 2 singles with one formulated product Additionally: diet, exercise</td>
<td></td>
</tr>
<tr>
<td>Bone</td>
<td>2001</td>
<td>General Herbal Practice-informative</td>
<td>Alzheimer’s disease</td>
<td>Research reviewed on herbs specific to Alzheimer’s disease</td>
<td></td>
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<tr>
<td>Bove</td>
<td>2001</td>
<td>Case history</td>
<td></td>
<td>Formulation: traditional Physiomedical formulation of 6 herbs</td>
<td>Traditional formulation</td>
</tr>
<tr>
<td>DiPasquale</td>
<td>2001</td>
<td>Case history</td>
<td>PMD related musculo-skeletal complaints</td>
<td>Formulations: (2 months) o Single herb o 7 herb tincture o 3 herb tincture o Topical herbal treatment Then: (4 months) o 4 herb tincture Additionally: diet</td>
<td>Baths, topical applications of herbs, tincture formulations, focus on balance and cause (liver clearance, HPA support) supportive herbs, Well-being as balance</td>
</tr>
<tr>
<td>Romm</td>
<td>2001</td>
<td>Case history</td>
<td></td>
<td>Formulations: o 3 herb tincture followed by o 3 herb tincture followed by o 3 herb tincture</td>
<td>Polyherb tinctures and local applications</td>
</tr>
<tr>
<td>Romm &amp; Treasure</td>
<td>Professional member survey</td>
<td>Use of Vitex agnus-castus for Hormonally related problems: PMS, perimenopause, menopause</td>
<td>47% use tincture 20% use dry plant material 14% capsules Used as single or in poly-formulations</td>
<td>Herb addressed in formulation</td>
<td></td>
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<tr>
<td>Stansbury</td>
<td>2001</td>
<td>Case history</td>
<td>PMS related varicosities (pelvic congestion)</td>
<td>Formulations: o 3 herb tincture for 4 months Additionally: specific exercises, dietary changes</td>
<td>Polyherb formulation</td>
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<tr>
<td>Author</td>
<td>Year</td>
<td>Type</td>
<td>Title</td>
<td>Summary</td>
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<tr>
<td>Bone</td>
<td>2002</td>
<td>General Herbal Practice</td>
<td><em>Topic: Modern Phytotherapy: Integrating scientific data and methodology with traditional herbal practice</em></td>
<td>Treatment of cause, health promotion, treatment as support, synergistic nature of herbs</td>
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<tr>
<td>Hedley</td>
<td>2002</td>
<td>General Herbal Practice</td>
<td><em>Galenic Humours in Clinical Practice: Notes for Practitioners</em></td>
<td>Balance/imbalance with constitutional matching of herbs and patients with formulations, constitutional terms adapted to chronic disease</td>
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<tr>
<td>Romm &amp; Treasure</td>
<td>2002</td>
<td>Professional member survey</td>
<td>Echinacea-, tendonitis, BPH, lymphadenopathy, immune modulation, acute infection, anti-viral 70% have used Echinacea with auto-immune disorders-Irritable bowel, Crohns, Rheumatoid arthritis</td>
<td>Most respondents had no preference to species but preferred quality, 33% had experienced interactions with prescription drugs Whole plant is used forms not addressed</td>
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<tr>
<td>Stansbury</td>
<td>2002</td>
<td>General Herbal Practice</td>
<td><em>The four element theory in clinical practice</em></td>
<td>4 elements in clinical practice, constitutional prescription with matching to the patient, formulations</td>
<td></td>
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<tr>
<td>Frances</td>
<td>2002</td>
<td>General Herbal Practice</td>
<td>Psycho-emotional disorders</td>
<td>Discussion of plant medicine</td>
<td></td>
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<tr>
<td>Romm &amp; Treasure</td>
<td>2002</td>
<td>Professional member survey</td>
<td>Piper methysticum (Kava)-anxiety, stress, depression, PMS, insomnia, neuralgias, hypertension, fibromyalgia, pain, headaches, muscular tension, substance abuse.</td>
<td>43% use as tincture 14% use as fluid extract and powder most frequently used in poly-formulations most commonly with valerian Polyherb formulation and use as single or 7 herb tea or 7 herb tincture Formulation</td>
<td></td>
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<tr>
<td>Romm, Treasure &amp; Upton</td>
<td>2003</td>
<td>Professional member survey</td>
<td>Ginkgo biloba*-migraines, allergies, sexual dysfunction, ADD, dementia, peripheral neuropathy, depression, circulatory enhancement, tinnitus,</td>
<td>36% use as tincture 34% use standardized extracts most frequently used in poly-formulations most commonly with Centella asiatica Formulation based on cause and symptoms (Gastric treatment for allergy)</td>
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<tr>
<td>Bove</td>
<td>2004</td>
<td>Case history</td>
<td>ADHD with gastric symptoms, dry skin, constipation, multiple food allergies</td>
<td>Formulations for gut restoration (1 year) ○ 7 herb tea ○ 7 herb tincture Additionally: diet modifications, exercise, dietary supplements</td>
<td>Herbs in formulation as treatment along with traditional use of plasters</td>
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<tr>
<td>Romm &amp; Gardiner</td>
<td>2004</td>
<td>Professional member survey</td>
<td>Chronic diseases treated by herbal practitioners in pediatric populations include: ADHD, acne, asthma, eczema, anxiety, depression, irritable bowel syndrome, allergies, behavior problems</td>
<td>Most common herbs used: chamomile, fennel, ginger, goldenseal, slippery elm, peppermint, licorice, marshmallow, calendula, and catnip. Herbs in formulation as treatment along with traditional use of plasters</td>
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<tr>
<td>Romm</td>
<td>2004</td>
<td>Case History</td>
<td>Acute disease- Pertussis</td>
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<tr>
<td>Romm</td>
<td>2004</td>
<td>General Herbal Practice</td>
<td>Acute disease – Upper respiratory infections in children</td>
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<tr>
<td>Author</td>
<td>Year</td>
<td>Type</td>
<td>Condition/Issue</td>
<td>Treatment Duration</td>
<td>Additional Treatments</td>
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<td>Bove</td>
<td>2004</td>
<td>Case history</td>
<td>Infantile dermatitis/atopic eczema                                                Formulation (3 months) treatment for allergy with gut herbs</td>
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<td>○ 4 herbs tincture for baby</td>
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<td>○ 4 herb tea for mother</td>
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<td>Additionally: topical cream, baths, Essential Fatty Acids (EFAs)</td>
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<tr>
<td>Romm &amp; Upton</td>
<td>2004</td>
<td>Professional member survey</td>
<td>Angelica sinensis for treatment of anemia, PMS, menopause, fibroids, cysts, endometriosis, circulatory</td>
<td>36% use as tincture in WHM poly-formulations</td>
<td>Herb in formulation, Herb classifications: blood tonics, Herb actions: nourishing, depletion</td>
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<td>Cabrera</td>
<td>2005</td>
<td>Case history</td>
<td>Irritable Bowel Syndrome with hemorrhoids                                         Formulation (3 months) treatment</td>
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<td>○ 7 herb tincture</td>
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<td>Additionally: topical herbal creams, baths, dietary supplements</td>
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<td>Khalsa</td>
<td>2005</td>
<td>General Herbal Practice-informative</td>
<td>Fibromyalgia                                                                    Discussion of multiple herbs, diet, massage, exercise, relaxation</td>
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<td>Rhoads</td>
<td>2005</td>
<td>Case history</td>
<td>PMS with fatigue and history of allergy, asthma, and constipation                 Formulation (2 months)</td>
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<td>○ 3 herb powder</td>
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<td>○ Single herb tincture</td>
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<td>then (6 weeks):</td>
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<td>○ 5 herb tincture</td>
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<td>then (2 weeks):</td>
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<td>○ 2 herb tea</td>
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<td>○ 5 herb tincture</td>
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<td>Additionally: diet and life style changes</td>
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<td>Spelman</td>
<td>2006</td>
<td>General Herbal Practice-informative</td>
<td>Chronic fatigue syndrome                                                         Discussion of multiple herb approach with immunomodulators, nervines, and hepatics with the addition of dietary supplements</td>
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<td>Brinckman</td>
<td>2007</td>
<td>Case history</td>
<td>Molluscum contagiosum with sensory defensiveness in a child                       Topical treatment of 3 herb formulation</td>
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<td>Wood</td>
<td>2007</td>
<td>General Herbal Practice-informative</td>
<td>Energetics and pharmacology: Steps towards bridging the gap in Western Herbal Medicine</td>
<td>Energetics of herbs matching energetics of persons</td>
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<td>Bergner</td>
<td>2008</td>
<td>General Herbal Practice-informative</td>
<td>The art of follow-up</td>
<td></td>
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<tr>
<td>Snow</td>
<td>2008</td>
<td>Case history</td>
<td>Lyme Disease                                                                     Formulation (1 month)</td>
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<td>○ 3 herb tincture</td>
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<td>then: (4 months)</td>
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<td>○ 7 herb tincture</td>
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<td>then: (5 months)</td>
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<td>○ 6 herb tincture</td>
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<td>Additionally: dietary changes with multiple dietary supplements</td>
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<tr>
<td>Author(s)</td>
<td>Year</td>
<td>Section</td>
<td>Disease Area</td>
<td>Description</td>
<td>Herb Preparations</td>
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<tr>
<td>Romm</td>
<td>2009</td>
<td>General Herbal Practice-informative</td>
<td>Insomnia</td>
<td>Discussion of differential use of 10 herbs for tincture and tea formulation. Formulation examples given differentiated by cause of insomnia. Additionally: implementation of sleep protocol.</td>
<td>Teas and tinctures</td>
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<tr>
<td>Karel</td>
<td>2009</td>
<td>General Herbal Practice-informative</td>
<td>Diabetes Mellitus type II</td>
<td>Discussion of 10 herbs potentially useful for DM-II.</td>
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<td>Holden</td>
<td>2010</td>
<td>General Herbal Practice-informative</td>
<td>Restless leg syndrome</td>
<td>Discussion of 3 primary herbs and 3 secondary herbs with differentiation for use.</td>
<td>Herb classifications: spasmolytic, nervine, tonics, energetics of patients matched to herb qualities.</td>
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<tr>
<td>Winston</td>
<td>2010</td>
<td>General Herbal Practice-informative</td>
<td>Alzheimer’s, atherosclerosis, hypertension, constipation, fatigue, achlorhydria, hypothyroidism, depression, insomnia, depressed immunity, depression, anxiety, arthritis, osteoporosis, sciatica, menopause, BPH, ED</td>
<td>Discussion of differential use of herbs for formulation.</td>
<td>Herb classifications: adaptogens, digestives, stimulants, nervines.</td>
</tr>
</tbody>
</table>
| DiPasquale | 2010 | Case history | Polycystic ovarian syndrome | Formulation (5 months)  
- 3 herb tea  
- additional 3 herb tincture  
- new formulation (capsule due to pt. preference) of 8 herbs  
- Infusion of single herb  
- 6 herb tincture  
- Single herb tea  
| Romm & Romm | 2010 | Professional member survey | Medicinal use of cannabis: chronic pain, cancer, migraine headaches, anorexia, glaucoma, nausea, anxiety, insomnia, HIV, spasticity, | Prescribed as single, delivery:  
- Smoking (55%)  
- Tincture (62%)  
- Vaporized (51%)  
- Edible (48%)  
- Also in salves  
Additionally used in formulation. | Herb use as single 80% of the time. |  |

* Ginkgo biloba- represents a new plant preparation of an adapted medicinal plant from TCM.
APPENDIX B:

SEARCH TERMS AND RESULTS
**INDIVIDUALIZED HERBAL FORMULATION SEARCH TERMS AND RESULTS**

<table>
<thead>
<tr>
<th>Database</th>
<th>Search terms</th>
<th>Total Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PubMed</strong></td>
<td>Individualized herbal medicine</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Individual herbal medicine formulation</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Phytotherapy clinical practice</td>
<td>296</td>
</tr>
<tr>
<td></td>
<td>Herbal medicine clinical practice</td>
<td>227</td>
</tr>
<tr>
<td></td>
<td>Practice model herbal medicine</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Traditional herbal healing practices</td>
<td>228</td>
</tr>
<tr>
<td></td>
<td>Individual phytotherapy</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Phytotherapy formulation practice</td>
<td>484*</td>
</tr>
<tr>
<td></td>
<td>Folk medicine practices</td>
<td>648*</td>
</tr>
<tr>
<td><strong>NCCAM</strong></td>
<td>Phytotherapy and herbal medicine and Chronic disease</td>
<td>65</td>
</tr>
<tr>
<td><strong>PubMed</strong></td>
<td>Chronic disease management and herbal medicine and phytotherapy</td>
<td>30</td>
</tr>
<tr>
<td><strong>CINAHL</strong></td>
<td>Chronic disease management and herbal medicine and phytotherapy</td>
<td>2</td>
</tr>
<tr>
<td><strong>Web of Knowledge</strong></td>
<td>Chronic disease management and herbal medicine and phytotherapy</td>
<td>15</td>
</tr>
</tbody>
</table>

Table shows electronic databases searched with terms used and total results obtained. All results pertaining to Ayurveda, Traditional Chinese medicine herbs, dental, food, and ethnobotanical studies were excluded along with results pertaining to herb extracts, isolated fractions, active ingredients, and patented products. All titles and/or abstracts were reviewed for eligibility in review.

*Inclusion: First 200 were reviewed without new literature retrieved. (Practice related searches included 10 years.)
APPENDIX C:

REVIEW OF THE LITERATURE: STATE OF THE SCIENCE
## Review of the Literature: State of the Science

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Design/focus</th>
<th>Measures/Sample</th>
<th>Findings</th>
<th>Strengths/Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bensoussan et al.</td>
<td>2004</td>
<td>Descriptive</td>
<td>Postal survey&lt;br&gt;<strong>n</strong> = 859 (33% response rate)&lt;br&gt;nationwide herbalists, naturopaths with 54 conventional practitioners using herbal medicines</td>
<td>-Herbal medicine and naturopathy make significant contributions to healthcare&lt;br&gt;-There is consumer use&lt;br&gt;-Practice pattern descriptions including consultations, adverse events, referral patterns, diagnostics, costs, &amp; herbal preparations&lt;br&gt;-Practitioner characteristics ie: education</td>
<td>-First study to begin to look at WHM&lt;br&gt;-Specific to Australia&lt;br&gt;-Survey not previously used or tested&lt;br&gt;-Low response rate&lt;br&gt;-No discussion on who the practitioners treat</td>
</tr>
<tr>
<td>Brush et al.</td>
<td>2006</td>
<td>PCDBT pilot study&lt;br&gt;Human immune cell activity of 3 single herb tinctures and combination effect</td>
<td>Interventional 5 groups:&lt;br&gt;3 single plant tinctures&lt;br&gt;1 combination of all three herbs&lt;br&gt;1 placebo&lt;br&gt;Baseline, 24 hour &amp; 7 day blood draws for CD69 expression&lt;br&gt;<strong>n</strong> = 16 healthy adults</td>
<td>-Echinacea purpurea, Astragalus membranaceus, &amp; Glycyrrhiza glabra activated and sustained activated immune cells (CD69 expression on CD4 &amp; CD8 T cells) as singles with and greater effect in combination both at 24 hours and 7 days&lt;br&gt;-Astragalus had strongest effect&lt;br&gt;-Glycyrrhiza the weakest effect&lt;br&gt;-The greatest effect was the 24 hour</td>
<td>-Dose and extractions (tinctures) were reasonable and represented what is used in WHM&lt;br&gt;-MOA study&lt;br&gt;-Commonly used WHM herbs&lt;br&gt;-Low sample size (pilot study)&lt;br&gt;-Not randomized</td>
</tr>
<tr>
<td>Casey et al.</td>
<td>2007</td>
<td>Descriptive</td>
<td>Postal survey&lt;br&gt;<strong>n</strong> = 378 (58% response rate)&lt;br&gt;members of Nat’l Herbalists Assoc. of Australia</td>
<td>-Showed prescription of individualized mixtures of herbal medicines.&lt;br&gt;-Single herbs not often used by 82% of herbalists&lt;br&gt;-90% use individually formulated herbal medicines using high concentration herbal extracts, followed by prescription of teas&lt;br&gt;-Concluded that WHM focuses on the individual in contrast to the disease</td>
<td>-Initial study looking at WHM&lt;br&gt;-Significant contribution to understanding and differentiation of WHM&lt;br&gt;-Specific to Australia&lt;br&gt;-Survey not previously used or tested&lt;br&gt;-Low response rate&lt;br&gt;-While study says practices remain focused on the individual there is no description of who the individuals or what is the range or boundaries of practice</td>
</tr>
<tr>
<td>Green et al.</td>
<td>2007</td>
<td>RPCT prospective pilot study&lt;br&gt;Effectiveness of Phytotherapy practitioner prescribed individual herbal formulation in the treatment of menopausal symptoms</td>
<td><strong>n</strong> = 45 (44 completed).&lt;br&gt;5 month duration&lt;br&gt;<strong>Intervention:</strong>&lt;br&gt;Herbal formulation + dietary consultation + life style changes&lt;br&gt;Treatment = 15&lt;br&gt;Control = 30&lt;br&gt;45-59 y/o menopausal women from single GP practice&lt;br&gt;<strong>Outcome measures</strong>&lt;br&gt;Green Climacteric scale &amp; MYMOP 2</td>
<td>-Clinically and statistically significant reduction in menopausal symptoms from individualized herbal treatments especially hot flashes and reduced libido</td>
<td>-Pragmatic trial&lt;br&gt;-No concurrent HRT&lt;br&gt;-Less than 40% had experienced treatments with herbal practitioners in the past&lt;br&gt;-Small sample, single setting, short duration&lt;br&gt;-Randomization process not discussed&lt;br&gt;-Most likely underpowered&lt;br&gt;-No information on formulation process</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Year</td>
<td>Study Type</td>
<td>Summary</td>
<td>Findings/Comments</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Guo et al.</td>
<td>2007</td>
<td>Systematic review</td>
<td>Individualized herbal medicine treatments for any indication - 3 articles found fitting criteria with electronic database search + personal contact of experts in field 2 reviewed studies were on TCM 1 reviewed study on WHM concluded: - Scarcity of evidence - Studies do not support use of individualized herbal medicine in any indication</td>
<td>Too few results to draw conclusions from</td>
<td></td>
</tr>
<tr>
<td>Zwickey et al.</td>
<td>2007</td>
<td>RDBT pilot study phase 0, Human immune cell activity of 3 single herb tinctures and combination effect</td>
<td>Interventional 4 groups: 3 single plant tinctures 1 combination of all three herbs Baseline, 24 hour &amp; 7 day blood draws for CD25 expression n = 14 healthy adults - 24 hour increase in CD25: • Significant for Echinacea purpurea • Notable for Astragalus membranaceus and Glycyrrhiza glabra • Combination of 3 herbs had no significant advantage - 7 day CD25-Echinacea group had sustained higher levels of CD25</td>
<td>- Dose and extractions (tinctures) were reasonable and represented what is used in WHM - MOA study - Commonly used WHM herbs - No placebo group - Small sample size</td>
<td></td>
</tr>
<tr>
<td>Casey et al.</td>
<td>2008</td>
<td>Descriptive</td>
<td>Perceptions of practice by WHM practitioners providing care concurrent with conventional practitioners Postal survey n = 378 (58.2% response rate) members of Nat’l Herbalists Assoc. of Australia - Practitioner characteristics of education, years of practice, and consultation patterns - Initial appointments are at least 60 minutes in length and extensive, WHM practitioners have follow-ups, use diagnostics from conventional medicine, value-referring pts. to conventional medicine - 60-80% of patients seeing herbalists have already seen their MD - 86% of herbalists report patients seeking consultation for chronic diseases and many on pharmaceuticals - 75% herbalists dispense herbs after initial consultation - 94% encourage open disclosure with patient and MD</td>
<td>- Valuable in understanding how herbalists practice - Significant contribution to understanding and differentiation of WHM - Not addressed were specific conditions treated by herbalists - Survey not previously used or tested - Specific to Australia</td>
<td></td>
</tr>
<tr>
<td>Evans</td>
<td>2008</td>
<td>Literature review with content analysis</td>
<td>To compare and contrast presentations of knowledge on medicinal plants and the practice of WHM in Australia by exploring how herbalists describe their treatment of patients in herbal medicine literature 31 articles met criteria out of 285 original articles from the Australian J. of Medical Herbalism from 1989-2008 Included: - Patient treatments Excluded: - Herbal actions - Not authored by practicing herbalists - Failure to discuss specifics - Number of articles on herbal therapeutics decreased during last decade - Herbalists use language and concepts of biomedicine - Evidence base for clinical practice is from research on individual plants and constituents (absent prior to 1992) - 15 articles included concepts of traditional herbal philosophy - No reference to vitalism in last 5 years Conclusion: traditional use is accepted as practice base but herbal literature suggests a focus on biomedical science (phytochemistry and clinical trails). Bioscience is replacing traditional knowledge of herbal medicine</td>
<td>- Validation of shift in herbal medicine towards biomedicine consequently followed by loss of evidence of traditional knowledge within the herbal literature - Specific to Australia - No discussion on range of practices or types of disorders or patients seen by WHM practitioners</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>Year</td>
<td>Study Type</td>
<td>Study Details</td>
<td>Participants</td>
<td>Outcome Measures</td>
</tr>
<tr>
<td>------------------</td>
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<td>-------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Hamblin et al.</td>
<td>2008</td>
<td>RPCDBT pilot study</td>
<td>Investigation of the effects of phytotherapy practitioner prescribed herbal formulation in the treatment of osteoarthritis of the knee. From 2 GP practices</td>
<td>n = 14 from 20 adults with osteoarthritis of the knee. From 2 GP practices</td>
<td>WOMAC, MYMOP</td>
</tr>
<tr>
<td>Wahl et al.</td>
<td>2008</td>
<td>RPC 2X2 factorial trial</td>
<td>To assess efficacy of Echinacea purpurea and/or osteopathic manipulation treatment for prevention of acute otitis media in children prone to chronic OM</td>
<td>n = 90 Children age 12-60 months with chronic OM</td>
<td>4 Groups -Double placebo -Echinacea + sham OMT -Placebo echinacea + OMT -Echinacea + OMT</td>
</tr>
<tr>
<td>Clare et al.</td>
<td>2009</td>
<td>Quasi-experimental</td>
<td>Non-randomized, no placebo, Determine if dandelion tincture increased urinary frequency and output</td>
<td>n = 28 (17 completed study) volunteers with mean age of 37.9 y/o</td>
<td>-Statically significant increase in frequency of urination in first 5 hours after the first dose. -Increase in excretion ratio (intake to output) following second dose -No change after 3rd dose. -No increase in volume out</td>
</tr>
<tr>
<td>Study</td>
<td>Year</td>
<td>Design</td>
<td>Objective</td>
<td>Setting</td>
<td>Intervention</td>
</tr>
<tr>
<td>-------</td>
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</tr>
<tr>
<td>Hipps et al.</td>
<td>2009</td>
<td>Preliminary open-label pilot study Quasi-experimental</td>
<td>Observe association between herbal tea (Breathe Easy) consumption and Chronic rhinosinusitis symptoms in African Americans</td>
<td>Multiple sites 6 week treatment period n = 55 (41 completed study) African Americans Treatment QID, TID, BID Self-report: Chronic Sinusitis Survey Scale following self-treatment</td>
<td>The QID dosing group (n=27) showed significant changes in self-reported health scales and improvement with the Chronic Sinusitis Survey Scale</td>
</tr>
<tr>
<td>Grant</td>
<td>2010</td>
<td>RCT</td>
<td>To evaluate the effect of spearmint tea on androgen levels and the degree of hirsutism in persons with PCOS</td>
<td>30 day 2 center n = 42 females with confirmed PCOS with known hirsutism from 19-42 y/o 2 groups: Intervention: spearmint tea BID Placebo: Chamomile tea Outcome: - Serum androgen levels - Serum gonadotropins - Hirsutism scale and questionnaire for self-report hirsutism</td>
<td>- Free and total testosterone levels were ↓ in intervention group with an increase in LH and FSH. (p&lt;.05) - Subjective assessments of hirsutism showed reductions - Objective clinical measure of hirsutism showed no significant change</td>
</tr>
<tr>
<td>Picon et al.</td>
<td>2010</td>
<td>RPC crossover, single blinded</td>
<td>To evaluate the laxative efficacy of the phytotherapeutic compound (tea) of Pimpinella anisum, foeniculum vulgare, sambucus nigra flowers, cassia augustifolia flowers</td>
<td>n = 20 Age 18-50 with chronic constipation</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D:

RECRUITMENT POSTING
RECRUITMENT POSTING

I am a doctoral student at the College of Nursing at the University of Arizona and I am an herbalist. I am doing research on tailoring or individualizing herbal formulations to patients with chronic disease. I am interested in how practicing herbalists formulate herbal medicines so I am interviewing herbalists that practice in the US and formulate herbal medicines. The interviews will be done with Skype, by phone or in person and may take 1.5 to 2 hours. I may need to re-contact you one or two times for additional information following the initial interview. If you are interested in participating in this study please contact me off Herbalhall at [Email address one] or [Email address two] and I will be glad to tell you more about this study.

Thank you for your help.

Kathryn Niemeyer
APPENDIX E:

PARTICIPANT INVITATION
Potential Participant Invitation for Key Herbalists for Recruitment

I am a doctoral student at the College of Nursing at the University of Arizona and I am an herbalist. I am doing research on tailoring or individualizing herbal formulations to patients with chronic disease. I am interested in how practicing herbalists formulate herbal medicines for patients with chronic diseases and I am interviewing herbalists that practice in the US and formulate herbal medicines. The herbalists must be in an active clinical herbal practice, treat patients with chronic disease and have 5 years experience in practicing herbal medicine. The interviews will be done with Skype, by phone, or in person and may take 1.5 to 2 hours. I may need to re-contact those persons participating one or two times for more information or clarification. **If you know any herbalist who may be willing to participating in this study I would appreciate it if you would please have them contact me at [email address one] or [email address two] or call me at [telephone number] If you have questions I will be glad to address them and tell you or potential study participants more about this study.**

Thank you for your help.

Kathryn Niemeyer
APPENDIX F:

SCREENING SCRIPT
SCREENING SCRIPT

*Introductions first then:*

Let me tell you little about this study. It is on individual formulations of herbal medicine for the treatment of chronic disease. I am interested in how herbalists fit or tailor multiple herbs together in formulation to individuals with chronic disease. It will take approximately 1.5 to 2 hours of your time and we could do it by phone, by Skype or perhaps in person. Following that I may contact you 1 or 2 additional times either by email or on the phone if I need clarification or more information or if to see if you can verify what I found. The interview would be voice recorded and then transcribed into a document that I can analyze and along with other interviews draw conclusions and develop a theory on how to tailor herbal formulations. All the interviews will be coded and you will not be identifiable.

The length of the interview really is the only disadvantage; it may be stressful or troublesome spending that amount of time in an interview. There are no risks. The advantage is the contribution you would be making to knowledge and information on the practice of herbal medicine. So, if you would participate, I will ask questions about your herbal practice and how you formulate medicines for persons with chronic illnesses.

Before you agree or disagree to participate I need to be sure you will be okay for this study. So I need to ask a couple of questions.

What kind of herbal medicine do you practice? _____________________________

What herbal training have you had? _________________________________________

How long have you been practicing herbal medicine? _________________________

Do you formulate your own herbal medicines? _______________________________

Do you treat patients with chronic diseases? ________________________________
Can you give me an example of a chronic disease you have treated? ____________

Do you have any questions about this?

If not eligible: I will thank them for their time and willingness to participate and let them know why I will not be interviewing them.

If eligible: So, do you think you would be interested?

If eligible and agree to participate: I will need to get back in touch with you in (approximate time 1-3 weeks) if you are selected to be interviewed and you will be sent a disclosure statement by email or mail. Then we can arrange the interview. Get contact information. Conclude by asking if they have questions and thanking them for their time and agreeing to participate.

Verbal agreement to participate: ____________________________

If eligible and does not agree: I will thank them for their time and conclude.
APPENDIX G:

DEMOGRAPHIC INFORMATION
DEMOGRAPHIC INFORMATION

Gender

Age

Highest degree earned

State herbal medicine practiced in

Employment status in herbal medicine

Education in herbal medicine

Hours a week herbal medicine is practiced

Additional job or professions

Setting of herbal medicine practice

Number of patients seen in one week

Title or type of herbal practitioner

Referrals received from conventional medical practitioners

Proportion of herbal medicines used with patients that are individually formulated

Other than individual formulations what form of herbal medicines do you prescribe?
APPENDIX H:

INTERVIEW GUIDE
INTERVIEW GUIDE

Introduce interview with what this study is about.

Phase I Questions:

- I am interested in how herbal practitioners fit herbal medicines to patients with chronic disease. So just off the top of your head, what can tell me about this?
- I am wondering if you could tell me about what you do when you see patients.
- Can you describe to me what is important to you when you are with patients and mentally prepare to make medicines?
- Can you walk me through a patient encounter?

Phase II Questions:

- Can you describe what you do when you see a patient and then make a medicine for them?
- What does it mean that herbal medicine is individualized or fit to the person?
- How do you determine the formulation?
- What are the salient or important things in patient encounters that help you determine herbal formulations?
- What are your beliefs about wellbeing and disease?
- What causes disease?
- How do herbs work with disease?
- What, in your experience, do you believe contributes to wellbeing?
- How do personal characteristics contribute to disease and wellbeing?
- How do herbs contribute to wellbeing?
• How do you determine what is and is not important in a patient’s story?
• What are you focusing on when the patient is telling you their story?
• How do you guide the patient’s story or elicit information from them?
• What characteristics of the person are important in determining the fit with herbal medicines?
• What contributes to your selection of specific herbs used in formulations?
• How does this fit with herbal medicine?
• How do you determine if a person needs herbal medicine?
• What do you need to know about the plant to prescribe it?
• What impacts your decision to use certain plants or not?
• What helps you decide on an herbal prescription/formulation?
• In what ways do you determine if a formulation works?
• What do you look for to see if a formulation is a good fit?
• Tell me how deciding on an herbal mix for someone with chronic disease is different from how you do it for someone with acute disease, or someone who may just want more energy or a cleanse.
• Does the person’s history with pharmaceuticals impact the decision making process in formulating herbal medicines?

Responses in the interview may lead to additional focused questions, for example:
• What steps do you go through…?
• How do you know…?
• What is the decision making process…?
• What is the most important aspect…?
• What drives this process?
• How would you teach this process to another person?
• Can you tell me what this means?
• What are the factors that contribute or impact this?

Phase III Questions:

- In your experience does this characterize how you make decisions related to the personal formulations of herbal medicine?
- Do you proceed through this process when fitting herbal medicines to persons with chronic disease?
- Is this how it is done?
- Would you say these variables and descriptions are drawn from your practice?
- Would you say that this is a central and important part of what you do?
- Are these beliefs representative of your convictions as an herbalist?

Phase IV Questions:

- Does this represent how you formulate herbal medicines for persons with chronic disease?
- Is this correct in your estimation?
- Does this match what you go through in clinical practice
APPENDIX I:

DISCLOSURE STATEMENT
DISCLOSURE STATEMENT

Study Title: The Process of Tailoring Western Herbal Medicines to Individuals with Chronic Disease

Principal Investigator: Kathryn Niemeyer – PhD student, University of Arizona, College of Nursing

Purpose of this study:
The purpose of this study is to develop a practice-based theory of the processes that Western Herbal Medicine practitioners use to fit or tailor herbal formulations to individuals with chronic disease.

Participation in this study:
Twenty participants will be interviewed and voice recorded. Eligibility to participate will be based on educational background, years of practice, and if you currently formulate herbal medicines for chronic disease. Final eligibility will be determined from a pool of volunteers to assure prescribing and educational diversity in the sample. Recruitment will be over a 3-week period and you will be notified if you have been selected to participate following that 3-week period of time. As a participant you may be contacted up to three times during the course of this study. The initial interviews will be 1.5 to 2 hours with the follow-up interviews being approximately 30 minutes. The total interview process of all 20 persons may take up to 3 months. All interviews will be audio-recorded then transcribed into a Word document to be analyzed. You will not be identified in any document and all study-related information will be kept private and confidential.

There are no direct or immediate benefits to you for participating in this study. However, you are making a contribution to the knowledge and understanding of Western Herbal Medicine. Likewise, while this study poses no physical risks, the interview process or questions asked about herbal medicine formulation may be troublesome or stressful. However, this hardship is minimal and not greater than that experienced in the course of normal daily activities. At any time, in the interview, you may refuse to answer any question. Likewise, you may refuse to participate in this study or quit the study at anytime without penalty.

The results of this study will be shared with you if you wish. The results will be part of my dissertation process and will be presented and defended by me with my committee and with my peers. It is my intent to share the findings with the herbal practitioner community through conference presentations and/or publication.

For questions or concerns, about the study you may contact Kathryn Niemeyer at [telephone number] or [email address one] or [email address two]
APPENDIX J:

UNIVERSITY OF ARIZONA INSTITUTIONAL REVIEW BOARD APPROVAL FORM
HSPP Correspondence Form

Date: 06/06/12
Investigator: Kathryn Niemeyer, MSN, MSc, PNP-BC, RN
Advisor: Mary Koidhan, PhD
Project No./Title: 12-0416-00 The Process of Tailoring Western Herbal Medicines to Individuals with Chronic Disease
Current Period of Approval: 06/06/12 – No Expiration

IRB Committee Information
Administrative Action: Administrative Review – New Project
FWA Number: FWA00004218

Documents Reviewed Concurrently
F200: Application for Human Research (signed 05/13/12)
Consenting Instruments:
  Disclosure Statement
F107: VOTF
Site Authorizations; Herbal Hall authorization e-mail (Appendix A)
Recruitment Materials:
  Recruitment E-mail (Appendix B)
  Participant Invitation for Key Herbalists (Appendix C)
  Recruitment Screening Script (Appendix D)
Data Collection Instruments:
  Demographic Information (Appendix E)
  Interview Guide (Appendix F)
Text and Material Review Guide (Appendix G)
Predoctoral Training Application - PHS Grant FT32AT1287-10
PI Biosketch

Determination
Approved as submitted effective 06/06/12

Regulatory Determination(s)
- Exempt Approval 45 CFR 46.101(b)(2): Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior.

06/06/12
Sheryl Wurf, PhD
Chair Designee, IRB2 Committee
UA Institutional Review Board

SW/ap
cc: Scientific/Scholarly Reviewer

Reminders: No changes to a project may be made prior to IRB approval except to eliminate apparent immediate hazard to subjects.
APPENDIX K:

PARTICIPANT DEMOGRAPHICS
Demographics (n=17)

<table>
<thead>
<tr>
<th>Gender</th>
<th>13 females</th>
<th>4 males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>29-64</td>
<td>Mean: 50</td>
</tr>
<tr>
<td>Education:</td>
<td>2 PhD</td>
<td>Herbal Education:</td>
</tr>
<tr>
<td></td>
<td>3 MS</td>
<td>1 BS</td>
</tr>
<tr>
<td></td>
<td>6 BS/BA</td>
<td>8 apprenticeships</td>
</tr>
<tr>
<td></td>
<td>5 some college</td>
<td>17 Certification and/or informal herbal education programs</td>
</tr>
<tr>
<td></td>
<td>1 high school</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1 NP, 1 PA, 2 RN, 1DTCM)</td>
<td></td>
</tr>
<tr>
<td>Herbal Medicine Experience:</td>
<td>7-40 years</td>
<td>Mean: 20.5 years</td>
</tr>
<tr>
<td>Client encounters per week:</td>
<td>2-30</td>
<td>Mean: 12.7</td>
</tr>
</tbody>
</table>

17 practitioners formulated a mean of 93% of the medicines they recommend
APPENDIX L:

HERBS DISCUSSED BY PARTICIPANTS
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Latin binomial or botanical name</th>
<th>Category, Actions and Qualities</th>
<th>Potential Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Vervain</td>
<td><em>Verbena officinalis</em>, <em>Verbena hastate</em></td>
<td>Nervine tonic, antispasmodic, diaphoretic, hepatic</td>
<td>Anxiety, depression, debilitation. Tissue states: no information</td>
</tr>
<tr>
<td>Burdock</td>
<td><em>Arctium lappa</em></td>
<td>Alterative, diuretic. Bitter, warm, moist</td>
<td>Dry skin conditions, digestive disorders, cystitis, wounds. Tissue states: stagnation, atrophy,</td>
</tr>
<tr>
<td>Chamomile</td>
<td><em>Matricaria recutita</em>, <em>Chamomilla recutita</em></td>
<td>Nervine, antispasmodic, carminative, anti-inflammatory, antimicrobial, bitter, vulnerary. Cold, dry</td>
<td>Digestive disorders, anxiety, respiratory constriction. Tissue states: irritation, stagnation, constriction,</td>
</tr>
<tr>
<td>Comfrey</td>
<td><em>Symphytum officinale</em></td>
<td>Vulnerary, demulcent, anti-inflammatory, astringent, expectorant. Cold, damp, bitter</td>
<td>Topical for wound healing or hemorrhage. Tissue states: atrophy, relaxation</td>
</tr>
<tr>
<td>Siberian Ginseng</td>
<td><em>Eleutherococcus senticosus</em></td>
<td>Adaptogen. Warm</td>
<td>Chronic disease, chronic stress, general depletion. Tissue state: atrophy, irritation</td>
</tr>
<tr>
<td>Ginger</td>
<td><em>Zingiber officinale</em></td>
<td>Carminative, stimulant, antispasmodic, diaphoretic, anti-inflammatory emmenagogue, rubefacient. Warm, moist</td>
<td>Digestive disorders, reduced peripheral circulation, inflammation. Tissue states: depression, constriction, atrophy</td>
</tr>
<tr>
<td>Holy Basil</td>
<td><em>Ocimum sanctum</em></td>
<td>Nervine, restorative, febrifuge, anti-fungal, anti-bacterial. Cold</td>
<td>Acute anxiety, lung constriction Tissue state: constriction, depression, stagnation, irritation</td>
</tr>
<tr>
<td>Licorice</td>
<td><em>Glycyrrhiza glabra</em></td>
<td>Adaptogen, anti-inflammatory, antispasmodic, antitussive, demulcent, expectorant, laxative, estrogenic, hypertensive. Moist, Neutral</td>
<td>Respiratory inflammation with cough, endocrine disorders, gastric irritation, constipation, stress, adrenal depletion. Tissue</td>
</tr>
<tr>
<td>Plant</td>
<td>Species</td>
<td>Actions</td>
<td>Tissue states</td>
</tr>
<tr>
<td>-------------------</td>
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</tr>
<tr>
<td>Marshmallow</td>
<td><em>Althaea officinalis</em></td>
<td>Demulcent, diuretic, anti-inflammatory, emollient, expectorant. Cool, moist</td>
<td>Gastric, respiratory and bladder wounds, irritation or inflammation, cough. Tissue states: atrophy, excitation</td>
</tr>
<tr>
<td>Milky oats</td>
<td><em>Avena sativa</em></td>
<td>Nervine tonic, nutritive demulcent, vulnerary, antidepressant. Warm, moist</td>
<td>Nervous debility with exhaustion and depression, general debility. Tissue state: atrophy</td>
</tr>
<tr>
<td>Motherwort</td>
<td><em>Leonurus cardiaca</em></td>
<td>Nervine, cardiotonic, antispasmodic, emmenagogue. Cool, dry</td>
<td>Stress related delayed menstruation, menopausal anxiety and palpitations or tachycardia. Tissue states: constriction, atrophy</td>
</tr>
<tr>
<td>Nettles</td>
<td><em>Urtica dioica</em></td>
<td>Astringent, diuretic, tonic, nutritive. Dry, hot</td>
<td>General depletion (anemia), myalgia, arthritis, (root: prostatic hypertrophy) Tissue states: depression, atrophy, stagnation, irritation</td>
</tr>
<tr>
<td>Oregon grape</td>
<td><em>Berberis aquifolium</em>, <em>Mahonia aquifolium</em></td>
<td>Alterative, cholagogue, laxative, tonic, gastric anti-inflammatory, bitter digestive, hepatotonic. Warm</td>
<td>Chronic dry skin conditions, constipation, gastric and gall bladder conditions,</td>
</tr>
<tr>
<td>Passionflower</td>
<td><em>Passiflora incarnata</em></td>
<td>Sedative nerve, antispasmodic, anodyne. Cool, dry</td>
<td>Insomnia, anxiety, nervous gastric disorders, restlessness. Tissue states: excited</td>
</tr>
<tr>
<td>Prickley ash</td>
<td><em>Zanthoxylum americanum</em></td>
<td>Circulatory stimulant, tonic, alterative, carminative, lymphatic diaphoretic. Warm, dry</td>
<td>Skin disorders, rheumatic disorders, cramps, varicose veins, ulcers. Tissue states: stagnant, contracted,</td>
</tr>
<tr>
<td>Rehmannia</td>
<td><em>Rehmannia glutinosa</em></td>
<td>(Uncured) Adaptogen, adrenal restorative, anti-</td>
<td>Anemia, adrenal depletion,</td>
</tr>
<tr>
<td><strong>Slippery elm</strong></td>
<td><em>Ulmus rubra</em></td>
<td>Demulcent, emollient, nutritive, anti-inflammatory. Moist</td>
<td>Mucus membranes of the gastric system, diarrhea, general depletion. Tissue states: atrophy, irritation, excited</td>
</tr>
<tr>
<td><strong>Turmeric</strong></td>
<td><em>Curcuma longa</em></td>
<td>Anti-inflammatory, hepatoprotective, cholagogue. Warm</td>
<td>Arthritis, respiratory and skin inflammation, digestive weakness, liver insufficiency. Tissue states: irritation, excited, stagnant</td>
</tr>
</tbody>
</table>
REFERENCES


NCCAM, & AARP. (2011). *What people aged 50 and older discuss with their healthcare providers.* NCCAM.nih.gov: NIH.


